

TRAFFIC SPEED REPORT NO. 86

SEPTEMBER 1968

NO. 17

Joint
Highway
Research
Project

PURDUE UNIVERSITY
LAFAYETTE INDIANA

by

S.S. HEJAL

TRAFFIC SPEED REPORT NO. 86

To: J. F. McLaughlin, Director
Joint Highway Research Project

From: H. L. Michael, Associate Director
Joint Highway Research Project

September 12, 1968

File: 8-3-3

Project: C-36-100

The attached Progress Report No. 86 on Traffic Speeds is the report of the 1968 study of free-flowing automobile and truck speeds on rural, tangent, level sections of Interstates, other 4-lane and 2-lane highways in Indiana. The study and report have been performed by Mr. Salim S. Hejal, a Graduate Instructor in Research on our staff, under the direction of Professor Michael.

The results indicate similar average speeds for all passenger cars and an increase of about 1.5 mph for all heavy trucks to those speeds noted in the 1967 study. A regression analysis of the speed data for the past eleven years indicated that the speed trend for all classes of vehicles on all classes of highway studied is an increasing one. Average speeds for passenger cars over all classes of highway have increased 0.85 mph annually and for all heavy trucks over all classes of highway the increase has been 0.87 mph annually.

Copies of this report are requested for release to the Indiana State Police, the Indiana Traffic Safety Council and the Indiana Office of Traffic Safety as is normal procedure for these reports. Copies will also be sent to the Bureau of Public Roads and several Departments within the ISHC. The report is presented for the record and for release as noted.

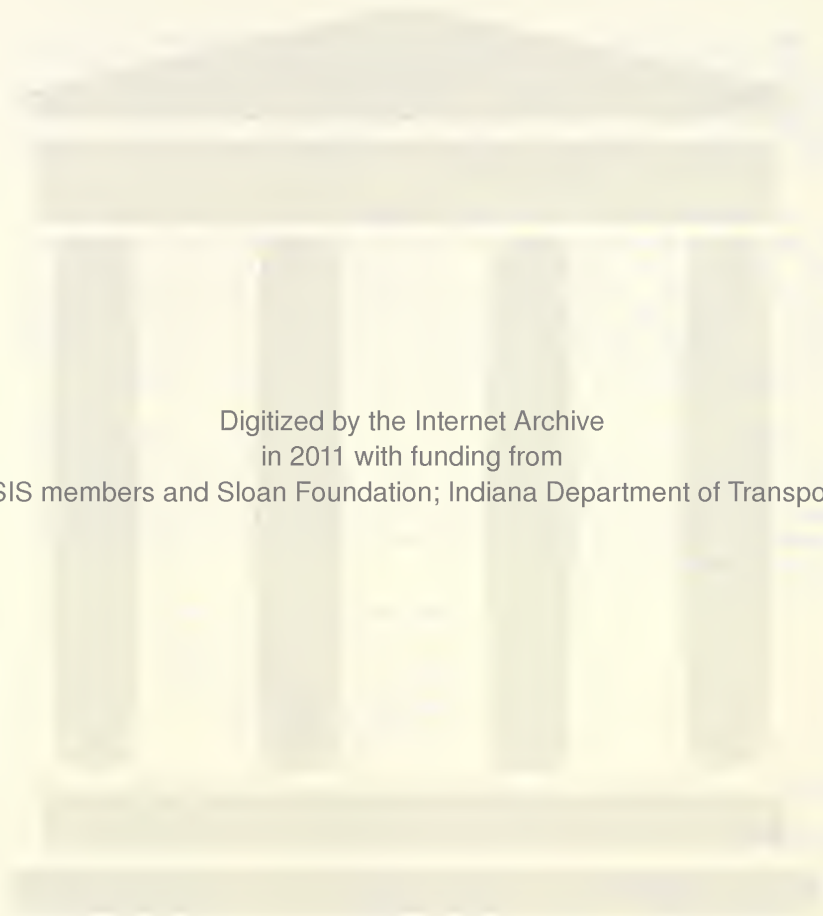
Respectfully submitted,

Harold L. Michael
Harold L. Michael
Associate Director

HLM:lh

Attachment

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Progress Report

TRAFFIC SPEED REPORT NO. 86

by

Salim S. Hejal
Graduate Assistant

Joint Highway Research Project

File No.: 8-3-3

Project No.: C-36-10C

Purdue University
Lafayette, Indiana
September 12, 1968

ABSTRACT

This report is the annual continuing study of the speeds of vehicles on rural Indiana highways. Observations of spot speeds were taken on interstate, other four lane, and two lane highways throughout the state during the months of June and July, 1968.

Analysis of the speeds showed the over-all average speed for passenger cars was 64.5 miles per hour. The over-all average speeds for trucks on the three types of highways was 56.5 miles per hour.

A regression analysis on the available results of the past eleven years showed an annual increase of 0.85 miles per hour for the over-all average speed of passenger cars and 0.87 miles per hour for the over-all average speed of heavy trucks.

TRAFFIC SPEED REPORT NO. 86

This report is an analysis of spot speed observations made during June and July 1968. All observations were made of free-flowing vehicles on level, tangent sections of rural Indiana highways during daylight and under favorable weather conditions. The same locations on selected Federal and State highways as used in 1967 were used again. Most of these locations have been the same for many years. Stations were classified as - two lane, four lane, or interstate highways. A representative sample of traffic speeds was obtained at each of the four stations in each classification. The specific site of each station was as follows: (see Figure A)

Interstate Highways

1. I-69 3.3 Miles South of Junction of S. R. 18
2. I-65 1.0 Miles West of Junction of S. R. 334
3. I-74 1.0 Mile East of Junction of Post Road
4. I-65 2.9 Miles North of Junction of S. R. 160

Four Lane Highways

5. U. S. 31 1.2 Miles South of Junction of S. R. 38
6. U. S. 52 1.0 Mile East of Junction of S. R. 28
7. U. S. 41 1.0 Mile North of South Junction of S. R. 2
8. U. S. 52 1.0 Mile West of Klondike

Two Lane Highways

9. U. S. 41 1.0 Mile North of Boswell
10. S. R. 43 2.0 Miles South of Chalmers
11. U. S. 31 3.0 Miles South of Rochester
12. S. R. 25 0.7 Miles West of Americus

The vehicles were classified as passenger cars or trucks. Passenger cars were further classified into two groups - Indiana or Non-Indiana and the analysis was performed as thus classified and combined. The trucks were also classified into two groups - Light (less than 5000 pounds gross weight) or Heavy (equal to or more than 5000 pounds gross weight), and again the analysis was performed as classified and combined.

The maximum speed limits in Indiana are as follows: 70 miles per hour on interstate highways and 65 miles per hour on other highways, unless otherwise posted. This is the second year that truck speed limits were the same as passenger cars. The stated maximum speed limits were applicable at all interstate, four lane and two lane stations of this study.

Equipment and Field Procedure

The observations for this report were obtained by use of an "Electronic" Radar Speed Meter, built by Automatic Signal Division, Eastman Industries, Inc., East Norwalk, Connecticut. The meter was placed approximately four feet from the edge of the pavement at an angle less than 10° with the highway center line. Speed inaccuracies are negligible at small angles (less than 10°) and therefore, corrections for angle were unnecessary.

At the beginning of the study the accuracy of the meter was checked; a constant discrepancy of minus two miles per hour was found and hence all readings of speed were corrected accordingly.

Results of Analysis

The data collected were analyzed and are summarized in Tables 1 to 12 in the Appendix. Tables 13, 14, and 15 summarize the data for

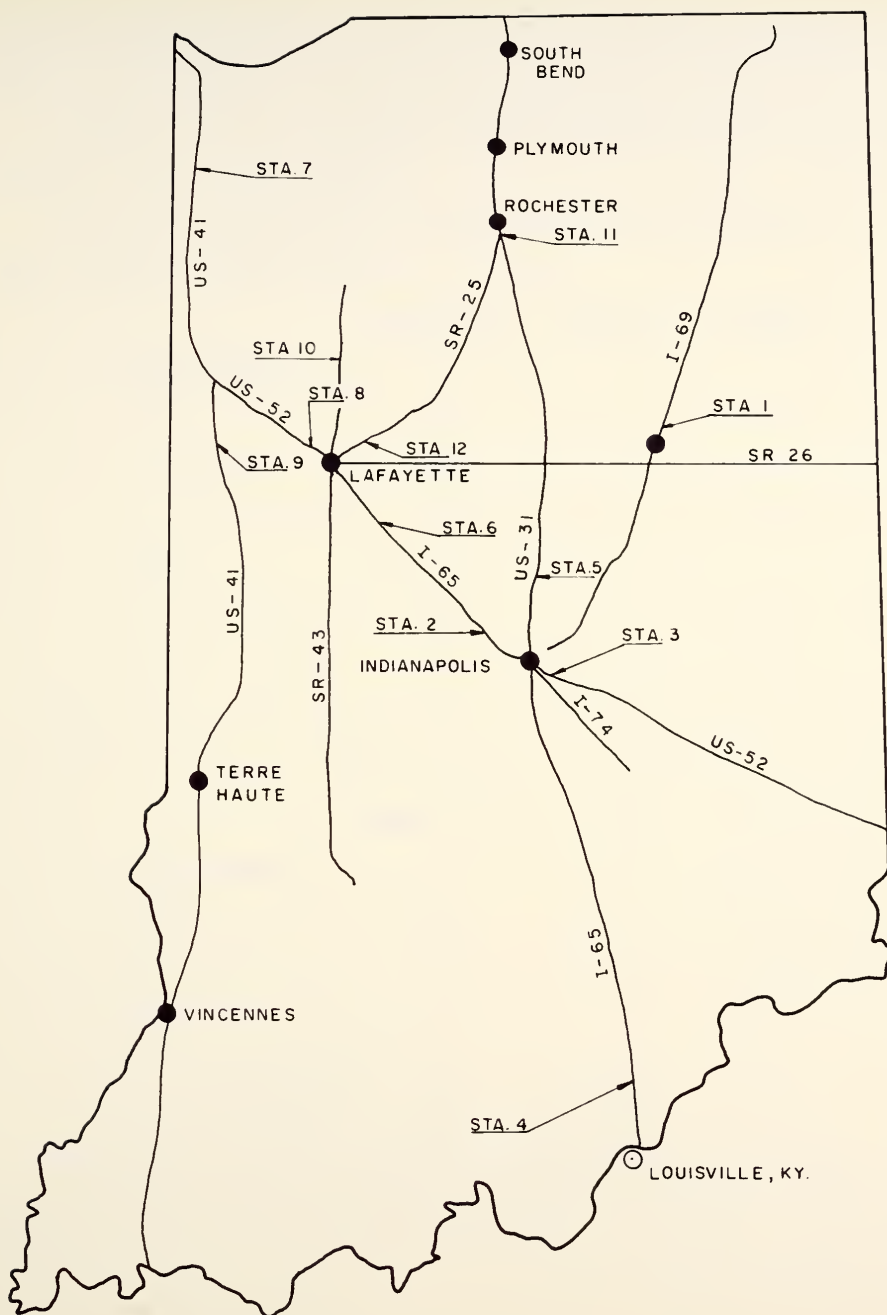


FIG. A - LOCATIONS OF SPEED-STUDY STATIONS

the three types of facilities: interstate, four lane, and two lane. Table 16 is the summary for all facilities observed.

Figures 1 to 16 in the Appendix show the accumulative speed curves for each of the stations studied.

The average speed for each classification of vehicles on each type of highway for this study was as follows:

	<u>Interstate</u>	<u>Four Lane</u>	<u>Two Lane</u>
<u>Passenger cars:</u>			
Indiana	66.1	60.2	61.2
Non-Indiana	67.9	66.2	62.4
85 percentile (all)	72.4	70.4	68.1
<u>Trucks:</u>			
less than 5000 lbs.	60.5	58.4	54.4
5000 lbs. or more	57.9	55.4	54.2

The percent of vehicles exceeding the speed limit for each classification of vehicle and each type of highway was as follows:

	<u>Interstate</u>	<u>Four Lane</u>	<u>Two Lane</u>
<u>Passenger cars:</u>			
Indiana	23.1	31.6	24.7
Non-Indiana	32.2	56.8	32.3
<u>Trucks:</u>			
less than 5000 lbs.	7.0	14.3	7.2
5000 lbs. or more	0.3	4.9	3.5

The percent of vehicles traveling 5 miles per hour or more above the speed limit for each case was as follows:

	1950-1954	1955-1959	1960-1964
<u>Passenger cars:</u>			
Indiana	5.2	14.7	17.6
Non-Indiana	3.0	19.5	6.1
<u>Trucks:</u>			
less than 5000 lbs.	1.0	4.4	0
5000 lbs. or more	0.3	0.7	0

The results of this study and similar studies conducted since 1958 are tabulated in Table A. A linear regression analysis on these results was conducted and a summary is given in Table B.

The hypothesis $\beta = 0$, where β is the slope of the linear graph of speeds versus year (annual trend), was tested and is turned out significant for all classifications at the 5% level. Another hypothesis $\beta = 1.0$ was tested to draw limits on the annual trend. It was significant in only 4 cases and not significant in the rest using the same level of significance as the previous hypothesis.

A graphical representation of Tables A and B is given in Figure 3.

TABLE 10. LOADS ON TRUCKS

BY MONTH AND SECTION

Date-Moving Traffic	Freight Car		Tractor Sections				
	Ind. Mean	Com. Avg.	1st	All	High Mean	Heavy Mean	All
Two-Lane Highways							
Aug. '50	54.1	56.3	50.0	55.7	53.0	48.3	47.8
Aug. '51	54.6	55.3	50.9	58.2	49.7	46.7	48.0
Sept. '50	55.7	55.0	50.0	52.0	49.0	47.4	49.1
Aug. '61	56.2	55.7	50.5	54.7	46.4	43.9	49.3
Aug. '62	55.7	57.5	50.0	53.7	43.4	49.3	50.1
June '63	56.9	57.7	50.2	54.0	52.5	47.3	49.7
July '64	59.1	50.1	50.5	56.6	53.9	51.7	52.4
Sept. '65	58.2	57.9	50.1	54.6	54.3	50.6	51.7
Sept. '66	60.1	59.5	50.4	58.9	51.4	50.8	52.0
Aug. '67	61.0	51.9	50.3	54.0	53.8	50.9	52.7
June '68	61.2	62.4	51.5	54.7	51.1	50.2	54.3
Four-Lane Highways							
Aug. '51	50.0	59.6	50.7	55.0	50.3	48.0	50.0
Aug. '52	50.4	60.7	50.7	53.5	50.0	50.1	48.5
Sept. '50	59.5	60.2	50.7	62.8	50.9	50.3	50.0
Aug. '61	50.6	57.6	50.6	62.5	50.7	50.3	51.0
Aug. '62	59.2	59.7	50.4	53.6	50.7	50.5	51.7
June '63	50.4	60.6	50.1	60.3	55.0	40.6	51.5
July '64	61.4	63.0	50.0	50.4	55.1	51.5	50.7
Sept. '65	60.1	62.1	50.0	50.2	55.4	53.1	53.7
Sept. '66	63.1	64.3	50.1	69.0	53.1	50.8	50.2
Aug. '67	64.3	65.0	50.0	70.0	50.0	50.0	50.0
June '68	64.2	66.2	50.2	70.4	50.0	50.0	56.2
Interstate Highways							
Aug. '61	56.7	56.9	50.2	64.0	50.3	51.5	52.4
Aug. '62	58.7	59.1	50.0	65.0	50.0	52.7	53.2
June '63	59.7	61.2	50.2	60.3	50.2	50.5	52.7
July '64	61.9	60.0	50.7	60.5	50.8	50.6	50.2
Sept. '65	61.2	62.1	50.1	67.7	50.8	50.0	53.9
Sept. '66	62.1	63.1	50.5	68.5	50.1	50.2	53.3
Aug. '67	66.4	65.9	50.1	70.6	50.0	50.9	50.5
June '68	66.2	67.9	50.0	72.4	50.5	50.0	53.5
All Rte.							
Aug. '50	55.7	57.5	50.1	63.1	50.4	48.3	48.7
Aug. '51	56.5	58.4	50.2	63.1	50.6	47.8	48.6
Sept. '50	57.3	57.9	50.7	63.7	50.7	49.4	50.2
Aug. '61	56.9	56.7	50.3	63.4	50.1	50.3	51.0
Aug. '62	58.2	58.7	50.4	65.1	50.5	51.2	51.8
June '63	59.0	59.0	50.3	65.2	50.1	49.5	51.7
July '64	60.8	62.4	50.5	69.2	50.2	50.7	50.1
Sept. '65	59.9	60.9	50.5	66.7	50.9	52.6	51.1
Sept. '66	61.8	62.4	50.0	68.7	50.7	52.7	53.8
Aug. '67	60.9	65.8	50.1	71.4	50.3	50.0	50.1
June '68	63.8	66.0	50.5	70.8	50.2	50.2	51.5

Data are only for those stations for which data are available.

Table B Summary of Linear Regression Analysis

Classification	No of Observ.	b_0	b_1	R^2	S_{b1}	Hypothesis Testing	
						$\beta = 0.0$	$\beta = 1.0$
Interstate Passenger Cars 85%	8	-9.68	1.213	.787	.258	*	NS
4 Lanes Passenger Cars 85%	11	28.00	0.600	.828	.094	*	*
2 Lanes Passenger Cars 85%	11	23.36	.653	.868	.085	*	*
Mean of All Passenger Cars	11	6.27	.851	.917	.085	*	NS
Mean of all Light Trucks	11	24.22	0.481	.804	.079	*	*
Mean of All Heavy Trucks	11	-3.50	.863	.890	.102	*	NS
Interstate Heavy Trucks 15%	8	-23.18	1.110	.921	.133	*	NS
4 Lanes Heavy Trucks 15%	11	6.03	0.620	.704	.134	*	*
2 Lanes Heavy Trucks 15%	10	-5.59	0.772	.789	.141	*	NS

* Significant @ 5% Level of Significance

NS Not Significant @ 5% Level of Significance

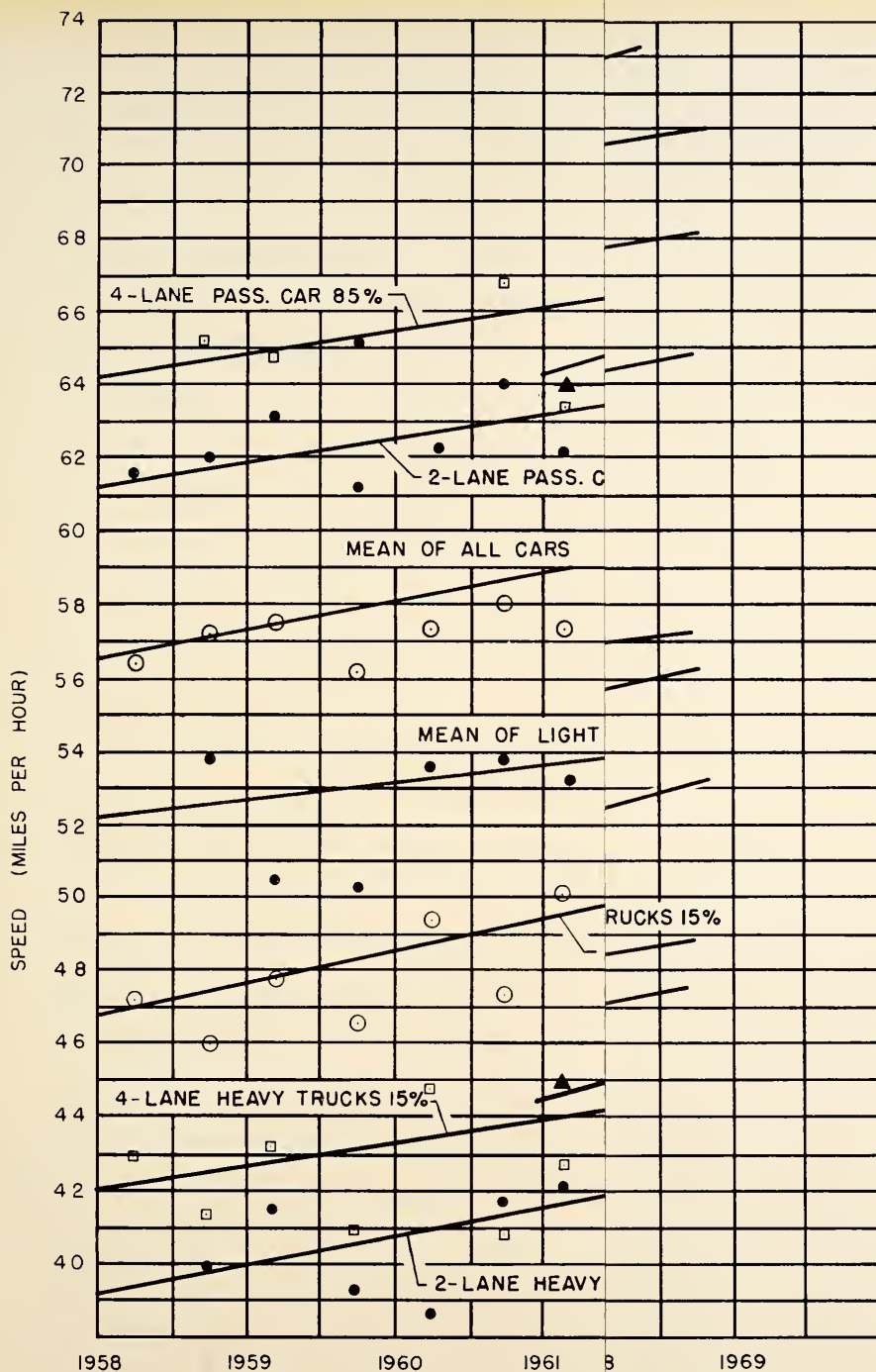


FIG. B - IN

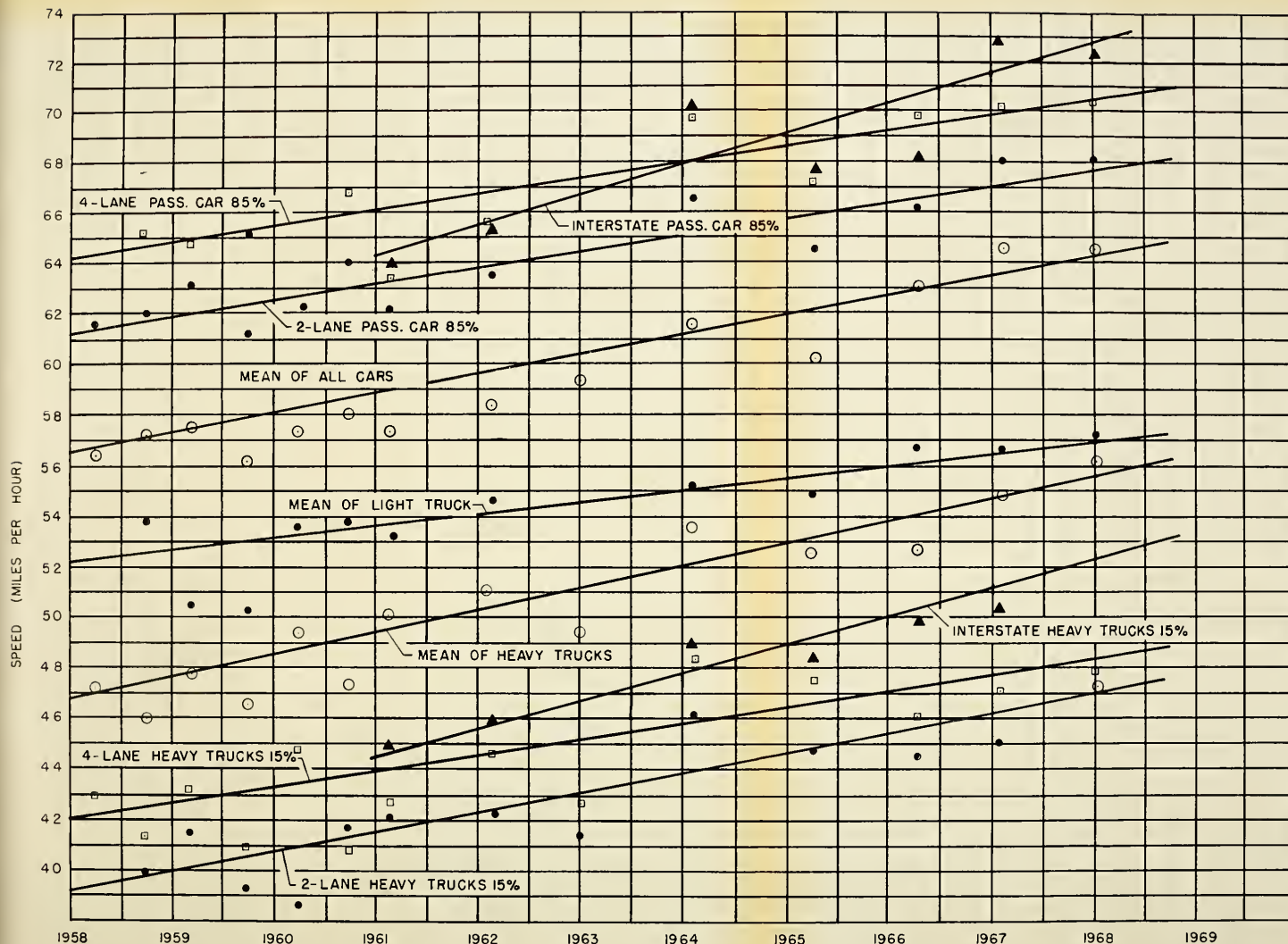


FIG.B- INDIANA RURAL SPEED TRENDS 1958-1968

Summary and Conclusions

The average speeds in this study were found to be similar for passenger cars and 1.5 miles per hour faster for trucks than the results of the previous year.

The linear regression on the results of the past ten years proved that there has been a definite increase in speeds for all vehicle and highway classifications studied. The annual trend for different speed characteristics such as 85 percentiles, average speeds, and 15 percentiles for passenger cars, light trucks and heavy trucks on the three classes of highways ranged between 0.48 and 1.21 miles per hour increase annually. For all passenger cars the annual increase was found to be 0.85 miles per hour for average speed and for all heavy trucks the annual increase in average speed was found to be 0.87 miles per hour.

It is interesting to note that although the speed limits for heavy trucks was increased by 15 m.p.h. to the speed limits for automobiles on the highways of Indiana a year and a half ago, no large increase has occurred in actual truck speeds. The effect of the change in speed limits for heavy trucks on actual speed appears to be negligible. In other words, trucks travel at speeds their drivers consider safe, irrespective of maximum speed limits. The growing percentage of automobiles violating current maximum speed limits especially on four-lane highways, tends to support a similar statement, namely that their drivers also select their travel speeds in the same manner.

APPENDIX

Determination of Sample Size

It was desired that a 95% confidence interval of the true mean of 1- speeds of passenger cars should not be wider than 2.0 mi. per hour. For trucks weighing 5,000 lb., or more a 90% confidence interval with a four mile per hour band was desired.

Assuming a normal distribution of speeds and using the standard deviation of the grouped data of the 1967 study, the minimum sample size requirement was determined by:

$$N = \left[\frac{2tS}{L} \right]^2$$

N = sample size required
t = tabulated "t" value for 5/2 significance
S = estimated standard deviation
L = width of the interval

For passenger cars:

$$N = \left[\frac{2 \times 1.96 \times 7.5}{2} \right]^2 = 316 \text{ observations}$$

For trucks:

$$N = \left[\frac{2 \times 1.96 \times 6.9}{4} \right]^2 = 56 \text{ observations}$$

Notes

At all stations more than 200 passenger car observations and 10 truck observations were obtained for the study reported herein.

TABLE 1 SPEED DATA

Station 1 Highway I-69 Location 3.3 Miles South of S.R. 18

No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Cloudy
 Date July 2, 1968 Last Previous Observation (Speed Report No. 85)
 Time 9:30-11:30 A.M. Date August 22, 1967
 Time 10:15 A.M.-12:45 P.M.

OBSERVATION	PASSENGER CARS						TRUCKS			
	All		Indiana		Non-Indiana		All		Less than 5000 pounds	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	240	216	169	142	71	74	83	93	15	12
Average speed (m.p.h.)	67.8	67.4	67.4	66.7	63.7	68.7	57.1	58.8	60.9	60.5
Standard deviation	6.63	6.40	6.55	6.06	6.79	6.84	6.02	6.54	8.73	9.89
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	0.0	0.5	0.0	0.7	0.0	0.0	0.0	1.1	0.0	0.0
49 m.p.h.	0.0	1.4	0.0	1.4	0.0	1.4	2.3	3.2	0.0	8.3
54 m.p.h.	2.1	4.2	1.8	4.2	2.3	4.1	7.9	5.4	13.3	8.3
59 m.p.h.	10.8	9.3	11.2	9.2	9.9	9.5	31.8	20.4	26.7	16.7
64 m.p.h.	32.5	29.2	34.9	31.7	26.8	24.3	61.4	54.8	40.0	58.3
69 m.p.h.	60.8	63.0	63.9	69.7	53.5	50.0	90.9	86.0	66.7	75.0
74 m.p.h.	85.0	90.3	86.4	93.0	81.7	85.1	97.7	97.9	86.7	91.7
79 m.p.h.	95.4	96.8	95.9	98.6	94.4	93.2	98.9	97.9	93.3	91.7
84 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	100.0	98.9	100.0	91.7
89 m.p.h.	-	-	-	-	-	-	-	100.0	-	100.0
No. of vehicles obs.	-	108	-	70	-	38	-	49	-	9
Average speed	-	67.8	-	67.3	-	68.6	-	59.7	-	60.4
No. of vehicles obs.	-	108	-	72	-	36	-	44	-	3
Average speed	-	67.0	-	66.1	-	68.9	-	57.9	-	61.0
Bound	-	-	-	-	-	-	-	-	-	-
Bound	-	-	-	-	-	-	-	-	-	-

TABLE 2 SPEED DATA

Station	2	Highway	I-65	Location	1.0 Mile West of S.R. 334
No. of Lanes	4	Type of Surface	Portland Cement Concrete	Weather	Cloudy
This Observation	Date	June 26, 1968	Last Previous Observation	(Speed Report No. 85)	
Date	Time	10:00 A.M.-12:30 P.M.	Date	August 26, 1967	
Time			Time	1:30-4:10 P.M.	

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	284	303	169	203	115	105	95	125	19	25	76	100
Average speed (m.p.h.)	66.7	66.5	65.7	65.9	68.1	67.7	58.5	58.4	61.1	59.9	57.9	58.0
Standard deviation	7.26	6.00	7.42	6.06	6.77	5.70	5.13	5.74	7.67	8.20	4.11	4.92
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.3	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	0.0	0.3	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
49 m.p.h.	1.8	0.3	1.8	0.5	1.7	0.0	3.2	8.0	5.3	12.0	2.6	7.0
54 m.p.h.	6.0	2.60	7.7	3.0	3.5	1.9	14.7	22.4	21.1	28.0	13.2	21.0
59 m.p.h.	15.1	11.7	18.3	14.3	10.4	6.7	62.1	58.4	36.8	44.0	68.4	62.0
64 m.p.h.	35.6	34.1	41.4	37.9	27.0	26.7	87.4	86.4	57.9	72.0	94.7	90.0
69 m.p.h.	64.4	69.2	71.0	72.4	54.8	62.9	95.8	96.8	84.2	84.0	98.7	100.0
74 m.p.h.	88.0	92.9	88.0	95.1	87.0	88.6	100.0	99.2	100.0	96.0	100.0	-
79 m.p.h.	96.5	98.7	96.5	99.0	96.5	98.1	-	100.0	-	100.0	-	-
84 m.p.h.	98.9	99.7	98.8	99.5	99.1	100.0	-	-	-	-	-	-
89 m.p.h.	99.7	99.7	100.0	99.5	99.1	-	-	-	-	-	-	-
No. of vehicles obs.	-	147	-	100	-	47	-	72	-	16	-	56
Average speed	-	66.3	-	65.9	-	67.0	-	58.5	-	59.9	-	58.1
No. of vehicles obs.	-	161	-	103	-	58	-	53	-	9	-	44
Average speed	-	66.7	-	65.8	-	68.2	-	58.3	-	60.0	-	57.9

TABLE 3 SPEED DATA

Station 3 Highway I-74 Location 1.0 Mile East of Post Road

No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Fair
 This Observation June 28, 1968 Last Previous Observation (Speed Report No. 85)
 Date June 28, 1968 Date August 23, 1967
 Time 8:00-10:30 A.M. Time 1:30-4:00 P.M.

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	257	321	170	243	87	78	113	99	25	34	88	65
Average speed (m.p.h.)	66.4	66.6	65.4	65.9	68.5	68.8	58.3	58.5	59.8	59.5	57.9	57.9
Standard deviation	7.33	6.60	7.09	6.66	7.40	5.94	5.72	6.11	7.74	7.00	4.98	5.57
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	0.0	0.3	0.0	0.4	0.0	0.0	0.0	3.0	0.0	0.0	0.0	4.6
49 m.p.h.	0.8	1.9	1.2	2.5	0.0	0.0	7.1	6.1	8.0	5.9	6.8	6.2
54 m.p.h.	6.2	4.1	7.7	5.4	3.5	0.0	23.0	22.2	24.0	26.5	22.7	20.0
59 m.p.h.	18.3	10.6	21.2	12.4	12.6	5.1	55.8	56.6	52.0	50.0	56.8	60.0
64 m.p.h.	37.4	36.5	41.8	40.3	28.7	24.4	92.0	86.9	80.0	76.5	95.5	92.3
69 m.p.h.	64.2	67.0	71.2	71.6	50.6	52.6	97.4	97.0	88.0	91.2	100.0	100.0
74 m.p.h.	88.3	91.0	91.2	92.2	82.8	87.2	99.1	100.0	96.0	100.0	-	-
79 m.p.h.	96.5	97.5	97.1	98.4	95.4	94.9	99.1	-	96.0	-	-	-
84 m.p.h.	99.2	99.4	100.0	99.6	97.7	98.7	100.0	-	100.0	-	-	-
89 m.p.h.	99.6	99.6	-	99.7	98.9	100.0	-	-	-	-	-	-
No. of vehicles obs.	-	171	-	123	-	48	-	41	-	14	-	27
Average speed	-	67.2	-	66.5	-	69.2	-	57.7	-	58.9	-	57.0
No. of vehicles obs.	-	150	-	120	-	30	-	58	-	20	-	38
Average speed	-	65.9	-	65.4	-	68.1	-	59.1	-	60.0	-	58.6

TABLE 5 SPEED DATA

Station 5 Highway U.S. 31 Location 1.2 Miles South of S.R. 38

No. of Lanes 4 Type of Surface Asphalt Concrete Weather Cloudy

This Observation Date June 26, 1968 Last Previous Observation (Speed report No. 85)

Date August 22, 1967

Time 1:30-4:30 P.M. Time 2:20-5:00 P.M.

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	243	277	201	227	42	50	101	85	48	38	53	47
Average speed (m.p.h.)	65.0	64.7	64.5	64.3	67.4	66.2	55.9	56.4	57.8	59.1	53.0	54.3
Standard deviation	6.92	7.00	6.99	7.11	6.08	6.19	7.58	6.75	7.94	6.92	6.51	5.83
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.4	0.0	0.4	0.0	0.0	1.0	0.0	0.0	0.0	1.9	0.0
44 m.p.h.	0.8	1.1	1.0	1.3	0.0	0.0	7.9	5.9	6.3	2.6	9.4	8.5
49 m.p.h.	2.1	2.2	2.5	2.2	0.0	2.0	25.7	16.5	20.8	10.5	30.2	21.3
54 m.p.h.	4.9	6.1	6.0	7.1	0.0	2.0	47.5	37.7	33.3	23.7	60.4	48.9
59 m.p.h.	17.3	20.6	19.9	22.0	4.8	14.0	67.3	71.8	54.2	52.6	79.3	87.2
64 m.p.h.	45.3	49.8	48.3	52.0	31.0	40.0	88.1	87.1	77.1	76.3	98.1	95.7
69 m.p.h.	76.9	76.9	79.1	79.7	66.7	64.0	98.0	96.5	95.8	92.1	100.0	100.0
74 m.p.h.	93.4	94.2	94.5	93.8	88.1	96.0	100.0	100.0	100.0	100.0	-	-
79 m.p.h.	97.5	98.2	97.5	97.8	97.6	100.0	-	-	-	-	-	-
84 m.p.h.	99.2	99.2	99.5	99.1	97.6	-	-	-	-	-	-	-
89 m.p.h.	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-	-
No. of vehicles obs.	-	124	-	106	-	18	-	29	-	13	-	16
Average speed	-	65.0	-	64.6	-	67.7	-	56.8	-	58.9	-	55.1
No. of vehicles obs.	-	153	-	12	-	32	-	56	-	25	-	31
Average speed	-	64.4	-	64.1	-	65.4	-	56.2	-	59.2	-	53.8



TABLE 6 SPEED DATA

Station 6 Highway U.S. 52 Location 1.0 Mile East of S.R. 28 Weather Cloudy
 No. of Lanes 4 Type of Surface Asphaltic Concrete Last Previous Observation (Speed Report No. 85)
 Date June 28, 1968 Date August 26, 1967
 Time 1:00-3:30 P.M. Time 10:30 A.M.-12:50 P.M.

OBSERVATION		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.		249	308	124	196	125	112	110	70	20	12	90	58
Average speed (m.p.h.)		65.8	65.9	65.4	65.1	66.0	67.1	56.4	55.3	58.4	59.7	55.9	54.3
Standard deviation		5.76	5.48	6.14	5.45	5.36	5.33	6.27	6.25	7.99	6.89	5.78	5.76
24 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.4	0.0	0.0	1.1	1.7
44 m.p.h.		0.8	0.0	1.6	0.0	0.0	0.0	3.6	2.9	0.0	0.0	4.4	3.5
49 m.p.h.		0.8	0.0	1.6	0.0	0.0	0.0	12.7	15.7	15.0	8.3	12.2	17.2
54 m.p.h.		4.4	2.3	4.8	3.1	4.0	0.9	36.4	47.1	40.0	25.0	35.6	51.7
59 m.p.h.		11.2	10.4	12.1	12.2	10.4	7.1	67.3	71.4	55.0	41.7	70.0	77.6
64 m.p.h.		37.0	41.9	38.7	48.5	35.2	30.4	92.7	94.3	80.0	75.0	95.6	98.3
69 m.p.h.		75.1	74.0	75.0	77.6	75.2	67.9	97.3	100.0	90.0	100.0	98.9	100.0
74 m.p.h.		96.4	95.5	96.0	96.9	96.8	92.9	100.0	-	100.0	-	100.0	-
79 m.p.h.		99.2	99.0	100.0	99.5	98.4	98.2	-	-	-	-	-	-
84 m.p.h.		100.0	99.7	-	99.5	100.0	100.0	-	-	-	-	-	-
89 m.p.h.		-	100.0	-	100.0	-	-	-	-	-	-	-	-
No. of vehicles obs.		-	148	-	105	-	43	-	32	-	4	-	28
Average speed		-	66.6	-	65.8	-	68.5	-	56.8	-	58.8	-	56.5
No. of vehicles obs.		-	160	-	91	-	69	-	38	-	8	-	30
Average speed		-	65.2	-	64.4	-	66.3	-	54.0	-	60.1	-	52.3



TABLE 7 SPEED DATA

Station 7 Highway U.S. 41 Location 1.0 Mile North of S.R. 2

No. of Lanes 4 Type of Surface Portland Cement Concrete Weather Fair
 Date July 1, 1968 Last Previous Observation (Speed Report No. 85)
 Time 2:00-4:30 P.M. Date August 28, 1967 Time 2:30-4:00 P.M.

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	197	252	87	152	110	100	96	102	16	16	80	86
Average speed (m.p.h.)	63.8	63.8	63.2	62.9	64.2	65.1	53.0	55.4	54.2	57.0	52.6	55.2
Standard deviation	5.98	6.20	6.30	6.31	5.70	5.80	6.79	7.21	6.78	6.56	6.77	7.32
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	4.2	1.0	0.0	0.0	4.8	1.2
44 m.p.h.	0.0	0.4	0.0	0.7	0.0	0.0	11.4	10.8	6.3	0.0	12.5	12.8
49 m.p.h.	1.5	2.0	1.2	3.3	1.8	0.0	28.1	20.6	18.8	12.5	30.0	22.1
54 m.p.h.	6.6	7.1	9.2	9.9	4.6	3.0	53.1	40.2	43.8	37.5	55.0	40.7
59 m.p.h.	20.8	13.7	26.4	19.7	16.4	17.0	84.4	66.7	75.0	56.3	86.3	68.6
64 m.p.h.	53.8	59.1	59.8	66.5	49.1	48.0	96.9	91.2	93.8	87.5	97.5	91.9
69 m.p.h.	84.3	84.9	83.9	88.8	84.6	79.0	100.0	99.0	100.0	100.0	100.0	98.8
74 m.p.h.	95.9	94.4	95.4	95.4	96.4	93.0	-	100.0	-	-	-	100.0
79 m.p.h.	100.0	97.6	100.0	98.0	100.0	97.0	-	-	-	-	-	-
84 m.p.h.	-	99.6	-	100.0	-	99.0	-	-	-	-	-	-
89 m.p.h.	-	100.0	-	-	-	-	-	-	-	-	-	-
No. of vehicles obs.	-	130	-	83	-	47	-	49	-	6	-	43
Average speed	-	63.7	-	62.9	-	65.0	-	51.6	-	57.0	-	50.9
No. of vehicles obs.	-	122	-	69	-	53	-	53	-	10	-	43
Average speed	-	63.8	-	62.8	-	65.2	-	59.0	-	57.0	-	59.4



TABLE 8 SPEED DATA

Station 8 Highway U.S. 52 Location 1.0 Mile West of Klondike
 No. of Lanes 4 Type of Surface Asphaltic Concrete Weather Fair
 Date July 1, 1968 Last Previous Observation (Speed Report No. 85)
 Time 9:30 A.M.-12:00 P.M. Date August 17, 1967
 Time 1:10-3:10 P.M.

PASSENGER CARS				TRUCKS			
OBSERVATION	All		Non-Indiana		All		5000 pounds or more
	Last	Present	Last	Present	Last	Present	
No. of vehicles obs.	280	266	147	153	133	113	
Average speed (m.p.h.)	65.0	65.1	64.0	64.3	66.2	66.2	76
Standard deviation	6.80	5.74	6.64	5.88	6.81	5.34	57.1
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	6.82
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0
44 m.p.h.	0.4	0.0	0.0	0.0	0.8	0.0	1.3
49 m.p.h.	1.4	0.8	2.0	0.7	0.8	0.9	4.0
54 m.p.h.	6.4	4.1	7.5	5.9	5.3	1.8	14.5
59 m.p.h.	17.5	12.0	23.1	15.7	11.3	7.1	32.9
64 m.p.h.	46.8	46.2	54.4	54.9	38.4	34.5	52.6
69 m.p.h.	75.0	76.3	80.3	78.4	69.2	73.5	90.8
74 m.p.h.	92.5	97.0	94.5	98.0	90.2	95.6	94.7
79 m.p.h.	98.2	98.5	99.3	98.7	97.0	98.2	100.0
84 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	-
89 m.p.h.	-	-	-	-	-	-	-
No. of vehicles obs.	-	122	-	77	-	45	-
Average speed	-	65.5	-	64.4	-	67.3	26
No. of vehicles obs.	-	144	-	76	-	68	57.0
Average speed	-	64.8	-	64.1	-	65.5	50
							57.2



TABLE 2 SPEED DATA

Station 9 Highway U.S. 41 Location 1.0 Mile North of Boswell

No. of Lanes 2 Type of Surface Portland Cement Concrete Weather Fair

Date June 21, 1968 Last Previous Observation (Speed Report No. 85)

Time 9:00-11:30 A.M. Date August 17, 1967

Time 8:45-11:30 A.M.

OBSERVATION	PASSENGER CARS						TRUCKS			
	All		Indiana		Non-Indiana		All		Less than 5000 pounds	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	228	247	118	145	110	102	137	106	53	40
Average speed (m.p.h.)	59.6	59.5	58.6	58.7	60.6	60.7	48.8	53.5	50.2	52.8
Standard deviation	6.50	7.21	6.55	7.91	6.33	5.91	6.92	6.13	6.61	7.22
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.9	1.9	2.5
39 m.p.h.	0.4	0.0	0.0	0.0	0.9	0.0	10.2	1.9	7.6	5.0
44 m.p.h.	1.3	2.0	1.7	3.5	0.9	0.0	24.1	7.6	20.8	10.0
49 m.p.h.	6.6	9.3	9.3	13.1	3.6	3.92	48.9	22.6	39.6	25.0
54 m.p.h.	20.2	24.7	25.4	30.3	14.6	16.7	86.9	55.7	79.3	57.5
59 m.p.h.	46.1	47.0	50.9	51.0	40.9	41.2	94.2	82.1	92.5	82.5
64 m.p.h.	78.5	75.7	83.1	77.9	73.6	72.6	99.3	98.1	100.0	97.5
69 m.p.h.	94.7	92.3	97.5	90.3	91.8	95.1	100.0	100.0	-	100.0
74 m.p.h.	99.1	99.2	99.2	98.6	99.1	100.0	-	-	-	-
79 m.p.h.	100.0	99.6	100.0	99.3	100.0	-	-	-	-	-
84 m.p.h.	-	100.0	-	100.0	-	-	-	-	-	-
89 m.p.h.	-	-	-	-	-	-	-	-	-	-
No. of vehicles obs.	-	121	-	60	-	61	-	60	-	21
Average speed	-	60.7	-	60.3	-	61.2	-	54.0	-	52.7
No. of vehicles obs.	-	125	-	84	-	41	-	46	-	19
Average speed	-	58.5	-	57.8	-	59.9	-	52.9	-	52.9

TABLE 10 SPEED DATA

Station 10 Highway U.S. 43 Location 2.0 Miles South of Chalmers

No. of Lanes 2 Type of Surface Asphaltic Concrete Weather Fair - Windy
 Date June 21, 1968 Last Previous Observation (Speed Report No. 85)
 Time 2:00-5:00 P.M. Date August 21, 1967 Time 9:00-11:30 A.M.

				PASSENGER CARS				TRUCKS			
				All		Indiana		Non-Indiana		All	
OBSERVATION	Last	Present		Last	Present	Last	Present	Last	Present	Last	Present
	249	286		195	245	54	41	84	78	37	33
No. of vehicles obs.	62.9	62.8		62.3	62.6	65.2	64.2	56.5	55.0	57.8	55.6
Average speed (m.p.h.)	8.91	7.90		9.34	7.97	6.78	7.43	7.72	7.50	9.60	8.36
Standard deviation	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
24 m.p.h.	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0		0.0	0.0	0.0	0.0	1.2	0.0	2.7	0.0
39 m.p.h.	0.0	0.0		0.0	0.0	0.0	0.0	2.4	0.0	5.4	0.0
44 m.p.h.	2.4	1.1		3.1	1.2	0.0	0.0	4.8	7.7	8.1	12.1
49 m.p.h.	7.6	3.8		9.7	4.1	0.0	2.4	13.1	25.6	16.2	24.2
54 m.p.h.	14.9	15.0		18.5	15.5	1.9	12.2	41.7	48.7	37.8	48.5
59 m.p.h.	31.7	31.1		35.4	32.7	18.5	22.0	64.3	69.2	56.3	60.6
64 m.p.h.	59.4	61.9		62.1	64.1	50.0	48.8	83.3	89.7	70.3	87.9
69 m.p.h.	80.7	81.8		81.0	82.5	79.5	73.1	95.2	93.7	89.2	97.0
74 m.p.h.	90.4	92.0		90.8	91.8	88.9	92.7	98.8	98.7	97.3	97.0
79 m.p.h.	96.8	97.2		96.9	97.1	96.3	97.6	100.0	100.0	100.0	100.0
84 m.p.h.	98.8	99.0		99.0	98.8	98.2	100.0	-	-	-	-
89 m.p.h.	99.2	99.3		99.0	99.2	100.0	-	-	-	-	-
No. of vehicles obs.	-	163		-	140	-	23	-	43	-	20
Average speed	-	61.7		-	61.4	-	63.7	-	55.5	-	54.2
No. of vehicles obs.	-	123		-	105	-	18	-	35	-	13
Average speed	-	64.3		-	64.2	-	64.8	-	54.4	-	57.6
All vehicles				PASSENGER CARS				TRUCKS			
at or less than				PASSENGER CARS				TRUCKS			
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50 or less than				PASSENGER CARS				TRUCKS			
50 or less than				PASSENGER CARS				TRUCKS			
50 or less than				PASSENGER CARS				TRUCKS			

TABLE 11 SPEED DATA

Station 11 Highway U.S. 31 Location 3.0 Miles South of Rochester Weather Cloudy
 No. of Lanes 2 This Observation Type of Surface Asphaltic Concrete Last Previous Observation (Speed Report No. 85)
 Date June 24, 1968 Date August 21, 1967
 Time 1:45-4:00 P.M. Time 1:30-3:30 P.M.

				PASSENGER CARS				TRUCKS			
				All		Indiana		Non-Indiana		All	
OBSERVATION				Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.				252	282	191	209	61	73	91	98
Average speed (m.p.h.)				62.6	61.8	62.5	61.2	63.1	63.5	55.0	54.6
Standard deviation				7.08	7.09	7.24	6.96	6.57	7.21	5.81	6.85
24 m.p.h.				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.				0.0	0.4	0.0	0.5	0.0	0.0	0.0	0.0
44 m.p.h.				1.2	1.8	1.1	1.9	1.6	1.4	6.6	4.1
49 m.p.h.				3.6	4.6	3.7	5.3	3.3	2.7	15.4	18.4
54 m.p.h.				11.9	12.8	13.6	14.4	6.6	8.2	42.9	49.0
59 m.p.h.				32.1	32.2	32.5	34.9	31.2	24.7	76.9	75.5
64 m.p.h.				59.1	69.2	59.2	74.2	59.0	54.8	96.7	93.9
69 m.p.h.				85.3	90.4	85.9	90.9	83.6	89.0	100.0	100.0
74 m.p.h.				96.0	97.5	95.3	98.6	98.4	94.5	-	-
79 m.p.h.				98.8	98.2	98.4	99.0	100.0	95.7	-	-
84 m.p.h.				99.6	98.9	99.5	99.0	-	98.6	-	-
89 m.p.h.				100.0	99.7	100.0	99.5	-	100.0	-	-
No. of vehicles obs.				-	140	-	97	-	43	-	36
Average speed				-	62.5	-	62.0	-	63.6	-	55.2
No. of vehicles obs.				-	142	-	112	-	30	-	62
Average speed				-	61.0	-	60.5	-	63.4	-	54.2
Bound											
All vehicles											
at or less than											
No. of vehicles traveling											
24 m.p.h.											
29 m.p.h.											
34 m.p.h.											
39 m.p.h.											
44 m.p.h.											
49 m.p.h.											
54 m.p.h.											
59 m.p.h.											
64 m.p.h.											
69 m.p.h.											
74 m.p.h.											
79 m.p.h.											
84 m.p.h.											
89 m.p.h.											
Bound											
No. of vehicles obs.											
Average speed											
No. of vehicles obs.											
Average speed											

TABLE 12 SPEED DATA

Station 12 Highway S.R. 25 Location 0.7 Miles West of Americus

No. of Lanes 2 This Observation of Surface Asphaltic Concrete Weather Fair

Date June 24, 1968 Last Previous Observation (Speed Report No. 85)

Time 10:00 A.M.-12:30 P.M. Date August 25, 1967

Time 10:00 A.M.-12:30 P.M. Time 12:00 P.M.

PASSENGER CARS				TRUCKS								
OBSERVATION	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	216	217	177	185	39	31	83	71	36	35	47	36
Average speed (m.p.h.)	59.7	61.6	59.7	61.4	59.6	63.0	52.7	54.0	53.1	54.9	52.4	53.2
Standard deviation	8.10	6.79	8.49	6.94	6.12	5.77	5.22	6.57	6.76	7.17	4.80	5.90
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	2.9	0.0	0.0
44 m.p.h.	1.9	0.0	1.7	0.0	2.6	0.0	4.8	7.0	5.6	11.4	4.3	2.8
49 m.p.h.	9.7	2.8	11.3	2.7	2.6	3.2	28.9	22.5	27.8	22.8	29.8	22.2
54 m.p.h.	22.5	15.7	26.6	17.7	20.5	3.2	61.5	52.1	61.1	40.0	61.7	63.9
59 m.p.h.	50.0	40.1	49.7	41.9	51.3	29.0	90.4	77.5	83.3	71.4	95.7	83.3
64 m.p.h.	75.9	69.6	74.0	71.0	84.6	61.3	98.8	95.8	97.2	94.3	100.0	97.2
69 m.p.h.	88.9	88.9	88.7	88.7	89.7	90.3	100.0	98.6	100.0	100.0	-	97.2
74 m.p.h.	97.2	95.4	96.6	95.2	100.0	96.8	-	100.0	-	-	-	100.0
79 m.p.h.	98.2	99.1	97.7	98.9	-	100.0	-	-	-	-	-	-
84 m.p.h.	99.5	100.0	99.4	100.0	-	-	-	-	-	-	-	-
89 m.p.h.	99.5	-	99.4	-	-	-	-	-	-	-	-	-
No. of vehicles obs.	-	111	-	95	-	16	-	36	-	18	-	18
Average speed	-	61.5	-	61.4	-	62.1	-	55.1	-	54.9	-	55.3
No. of vehicles obs.	-	106	-	91	-	15	-	35	-	17	-	18
Average speed	-	61.7	-	61.3	-	63.9	-	52.9	-	54.0	-	51.1

TABLE 13 SPEED DATA

Station 1, 2, 3, & 4 Highway Interstate Location See Individual Stations

No. of Lanes This Observation Type of Surface Last Previous Observation (Speed Report No. 85)

Date Time Date Time

OBSERVATION		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.		1051	1168	653	742	398	426	1226	444	80	100	346	344
Average speed (m.p.h.)		67.1	66.3	66.4	66.1	68.3	67.9	57.5	58.5	60.0	60.5	56.9	57.9
Standard deviation		6.26	6.26	6.36	6.34	6.97	5.98	5.86	5.85	7.55	7.27	5.25	5.23
24 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.3	0.0
39 m.p.h.		0.0	0.1	0.0	0.1	0.0	0.0	0.5	0.2	0.0	0.0	0.6	0.3
44 m.p.h.		0.0	0.4	0.0	0.7	0.0	0.0	1.6	1.4	0.0	1.0	2.0	1.5
49 m.p.h.		0.8	1.0	0.3	1.5	0.3	0.2	8.2	6.1	10.0	6.0	7.8	6.1
54 m.p.h.		4.6	3.3	5.1	4.2	3.3	1.9	27.0	22.1	23.3	20.0	27.8	22.7
59 m.p.h.		13.2	10.9	15.0	12.1	10.3	8.7	62.4	55.9	46.3	42.0	66.2	59.9
64 m.p.h.		34.3	33.4	38.0	37.5	28.1	26.3	91.6	87.4	73.8	72.0	95.7	91.9
69 m.p.h.		62.2	66.9	67.3	71.0	53.0	59.6	97.4	97.5	88.3	90.0	99.4	99.7
74 m.p.h.		86.7	91.6	88.5	93.0	83.7	89.2	99.5	99.3	97.5	98.0	100.0	99.7
79 m.p.h.		96.5	97.9	96.8	98.5	96.0	96.7	99.8	99.8	98.8	99.0	-	100.0
84 m.p.h.		99.8	99.7	99.7	99.7	99.0	99.8	100.0	100.0	100.0	100.0	-	-
89 m.p.h.		99.8	99.8	99.8	99.7	100.0	100.0	-	-	-	-	-	-

TABLE 14 SPEED DATA

Station 5, 6, 7, & 8 Highway 4 Lanes Location See Individual Stations

No. of Lanes This Observation Type of Surface Last Previous Observation (Speed Report No. 85)

Date Date

Time Time

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	969	1103	559	728	410	375	404	358	116	91	288	267
Average speed (m.p.h.)	65.0	64.9	64.4	64.2	55.7	65.2	54.9	56.2	57.0	58.4	54.1	55.4
Standard deviation	6.44	6.15	6.64	6.31	6.09	5.61	6.75	6.93	7.35	7.20	6.31	6.68
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
39 m.p.h.	0.0	0.1	0.0	0.1	0.0	0.0	1.2	0.8	0.9	0.0	1.7	1.1
44 m.p.h.	0.5	0.4	0.7	0.5	0.2	0.0	7.2	6.4	4.3	3.3	8.3	7.5
49 m.p.h.	1.4	1.2	2.0	1.5	0.7	0.5	19.6	17.0	16.4	12.1	20.8	18.7
54 m.p.h.	5.6	4.8	6.6	6.3	4.2	1.9	46.5	39.1	39.7	29.7	49.3	42.3
59 m.p.h.	16.5	15.7	20.0	18.0	11.7	11.2	73.3	65.9	59.5	51.7	78.8	70.8
64 m.p.h.	45.3	48.9	49.6	54.7	39.5	37.6	93.8	89.7	85.3	78.0	97.2	93.6
69 m.p.h.	77.4	77.3	79.3	80.7	74.9	72.0	98.5	97.2	96.6	94.5	99.3	98.1
74 m.p.h.	94.4	95.6	95.0	96.0	93.7	94.7	100.0	100.0	100.0	100.0	100.0	100.0
79 m.p.h.	98.7	98.4	98.9	98.5	98.3	98.1	-	-	-	-	-	-
84 m.p.h.	99.8	99.8	99.8	99.9	99.8	99.7	-	-	-	-	-	-
89 m.p.h.	100.0	100.0	100.0	100.0	100.0	100.0	-	-	-	-	-	-

All vehicles

8 of vehicles traveling at or less than

TABLE 15 SPEED DATA

Station 2, 10, 11, 12 Highway 2 Lanes Location See Individual Stations

No. of Lanes This Observation Type of Surface Last Previous Observation (Speed Report No. 85) Weather
Date Date
Time Time

OBSERVATION	PASSENGER CARS						TRUCKS					
	All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.	945	1032	681	785	264	247	395	353	159	153	236	200
Average speed (m.p.h.)	61.3	61.5	61.0	61.2	61.9	62.4	52.7	54.3	53.9	54.4	51.9	54.2
Standard deviation	7.86	7.38	8.25	7.57	6.72	6.69	7.22	6.72	7.66	7.80	6.81	5.79
24 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.0	0.7	0.4	0.0
34 m.p.h.	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.9	1.3	2.0	1.3	0.0
39 m.p.h.	0.1	0.1	0.0	0.1	0.4	0.0	4.1	1.7	3.8	3.9	4.2	0.0
44 m.p.h.	1.7	1.3	1.9	1.5	1.1	0.4	11.9	6.5	10.7	9.8	12.7	4.0
49 m.p.h.	6.8	5.1	8.4	5.7	2.7	3.2	29.4	22.1	25.8	23.5	31.8	21.0
54 m.p.h.	17.8	16.9	20.4	18.5	11.0	11.7	61.8	51.5	56.6	48.4	65.3	54.0
59 m.p.h.	39.5	37.1	41.0	38.9	35.6	31.6	83.0	76.9	76.7	70.6	87.3	81.0
64 m.p.h.	67.7	68.8	68.0	71.0	67.1	61.9	95.2	94.6	90.6	92.8	98.3	96.0
69 m.p.h.	87.2	88.2	87.2	87.6	87.1	99.9	99.0	99.4	97.5	99.4	100.0	99.5
74 m.p.h.	95.6	95.9	95.0	95.7	96.9	96.3	99.8	99.7	99.4	99.4	-	100.0
79 m.p.h.	98.4	98.5	98.1	98.5	99.2	98.4	100.0	100.0	100.0	100.0	-	-
84 m.p.h.	99.5	99.4	99.5	99.4	99.6	99.6	-	-	-	-	-	-
89 m.p.h.	99.7	99.7	99.6	99.6	100.0	100.0	-	-	-	-	-	-

All vehicles

3 of vehicles traveling at or less than

TABLE 16 SPEED DATA

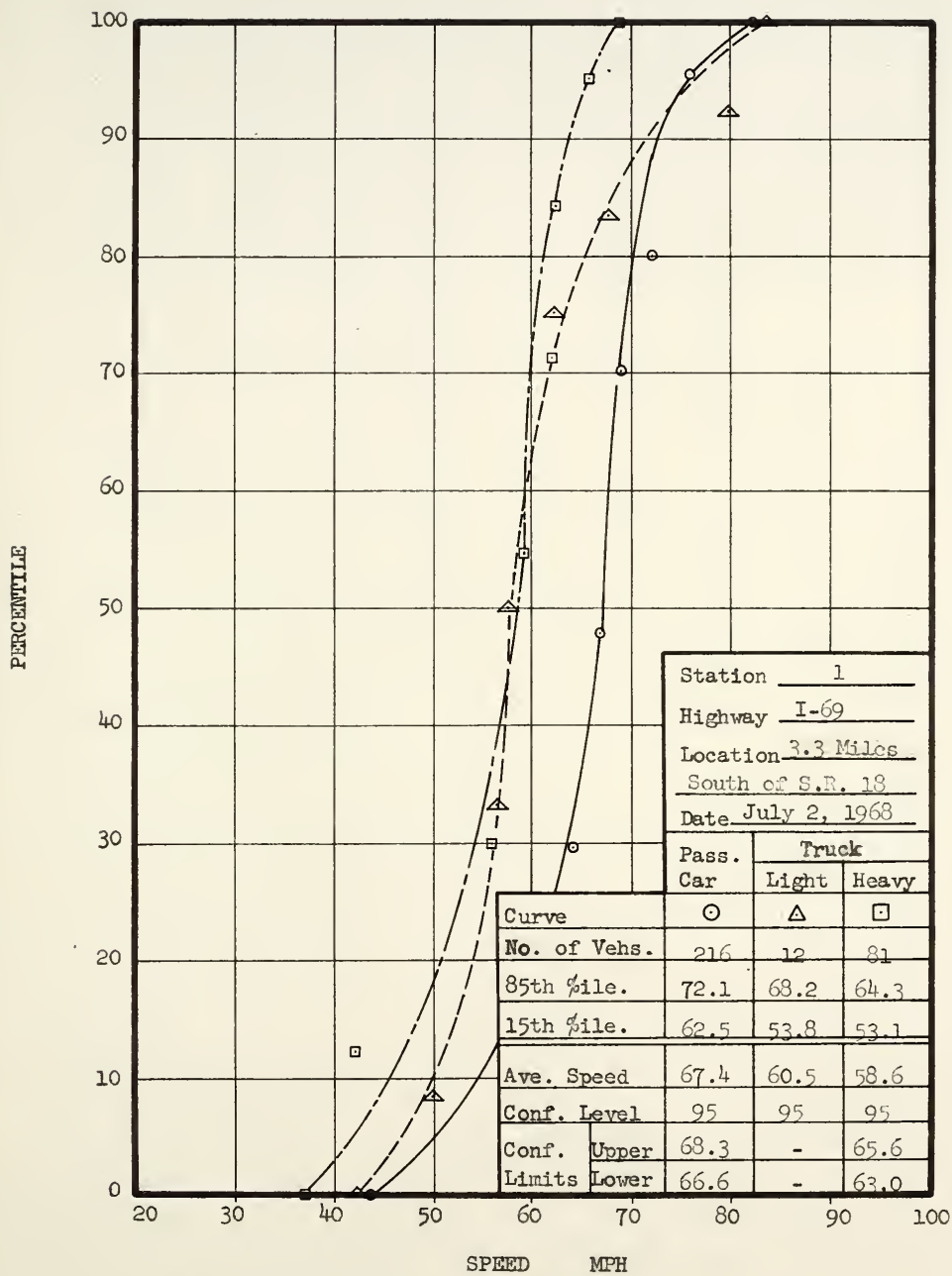
Station 1 Thur 12 Highway All Systems Location See Individual Stations

No. of Lanes 1 This Observation Type of Surface Last Previous Observation (Speed Report No. 35)

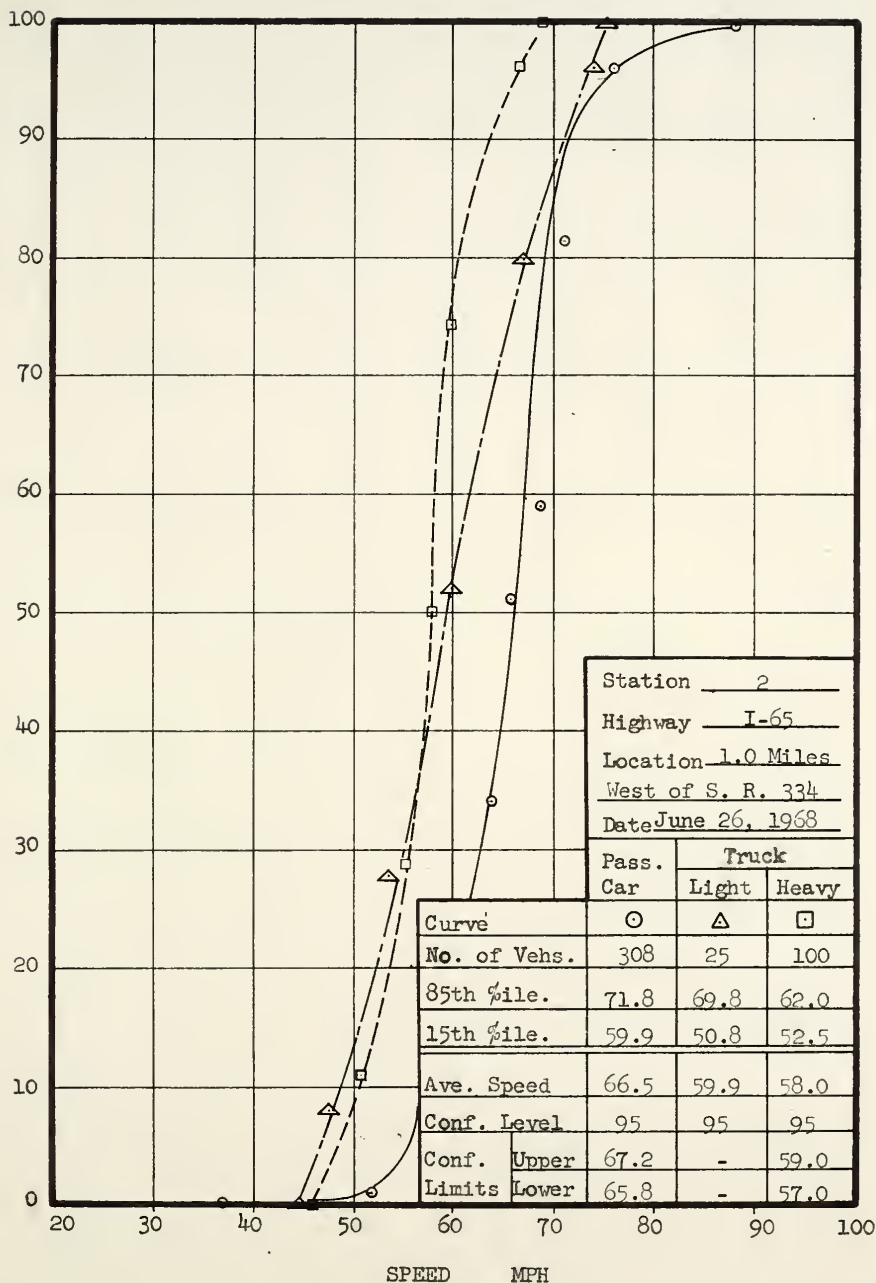
Date Time

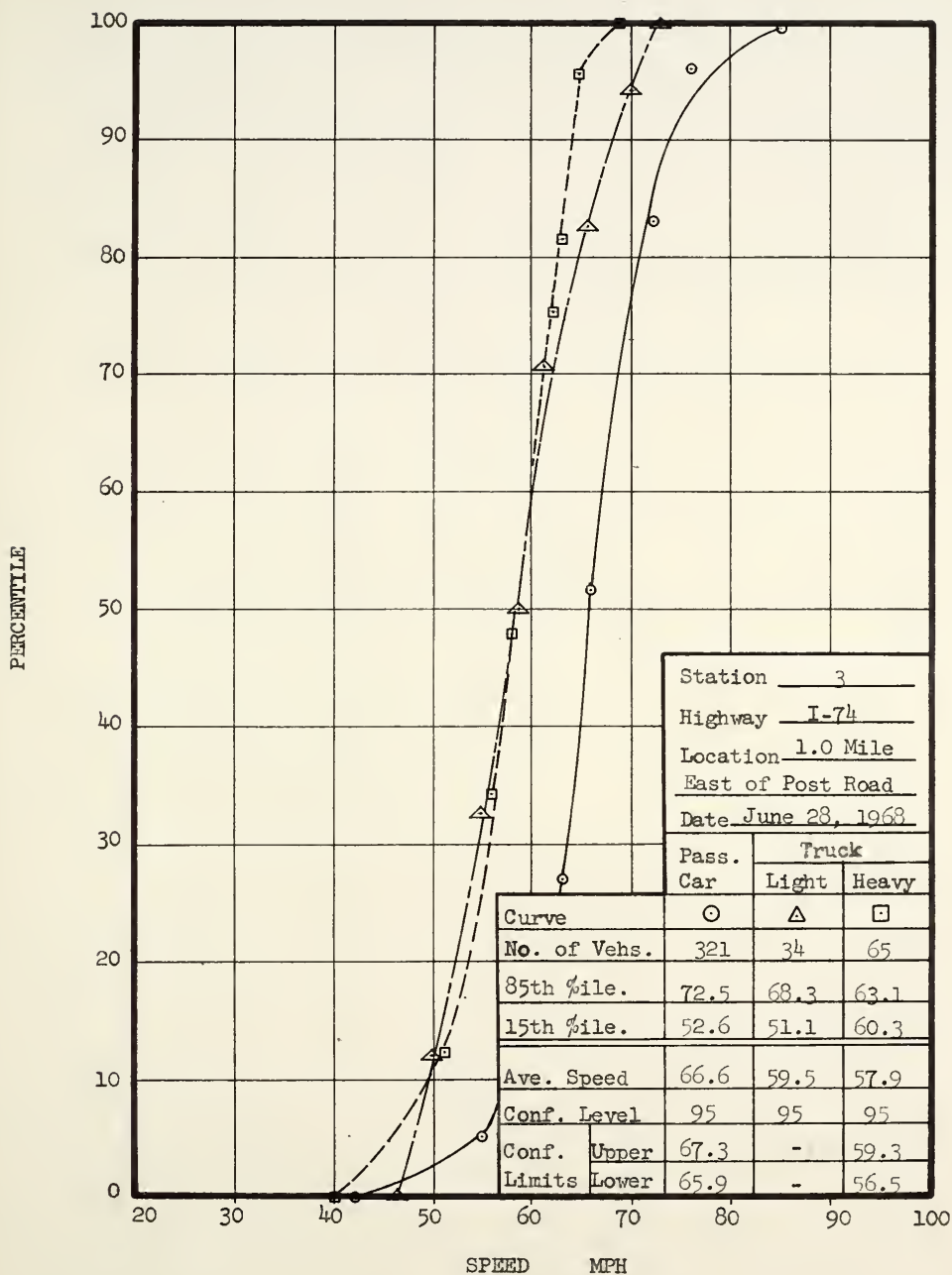
OBSERVATION		PASSENGER CARS						TRUCKS					
		All		Indiana		Non-Indiana		All		Less than 5000 pounds		5000 pounds or more	
		Last	Present	Last	Present	Last	Present	Last	Present	Last	Present	Last	Present
No. of vehicles obs.		2965	3303	1893	2255	1072	1048	1225	1155	355	344	870	811
Average speed (m.p.h.)		64.5	64.5	63.9	63.8	65.3	66.0	55.1	56.5	56.3	57.2	54.6	56.2
Standard deviation		7.50	6.94	7.68	7.08	7.02	6.39	6.90	6.70	7.89	7.93	6.40	6.08
24 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
29 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.3	0.1	0.0
34 m.p.h.		0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.3	0.6	0.9	0.5	0.0
39 m.p.h.		0.0	0.1	0.0	0.1	0.1	0.0	2.1	0.9	2.3	1.7	2.1	0.5
44 m.p.h.		0.7	0.7	0.7	0.9	0.4	0.0	6.8	4.5	6.2	5.5	7.0	4.1
49 m.p.h.		2.9	2.4	3.9	3.0	1.2	0.1	18.3	14.4	19.2	15.4	18.6	13.9
54 m.p.h.		9.1	8.1	11.0	9.3	5.7	4.2	44.7	36.4	43.7	35.2	45.1	36.9
59 m.p.h.		22.7	20.7	25.3	23.3	17.1	15.0	72.7	65.3	64.2	57.3	76.1	68.7
64 m.p.h.		48.5	49.5	52.2	54.7	42.1	38.7	93.5	90.3	85.1	82.8	96.9	93.5
69 m.p.h.		75.1	77.2	78.2	80.0	69.8	71.2	98.3	98.0	95.2	95.4	99.5	99.1
74 m.p.h.		92.0	94.3	92.8	94.9	90.3	92.9	99.8	99.7	99.2	99.1	100.0	99.9
79 m.p.h.		97.9	98.2	97.9	98.5	97.7	97.5	99.9	99.9	99.7	99.7	-	100.0
84 m.p.h.		99.6	99.7	99.6	99.7	99.4	99.7	100.0	100.0	100.0	100.0	-	-
89 m.p.h.		99.8	99.8	99.8	99.8	99.3	100.0	-	-	-	-	-	-

All vehicles
% of vehicles traveling
at or less than

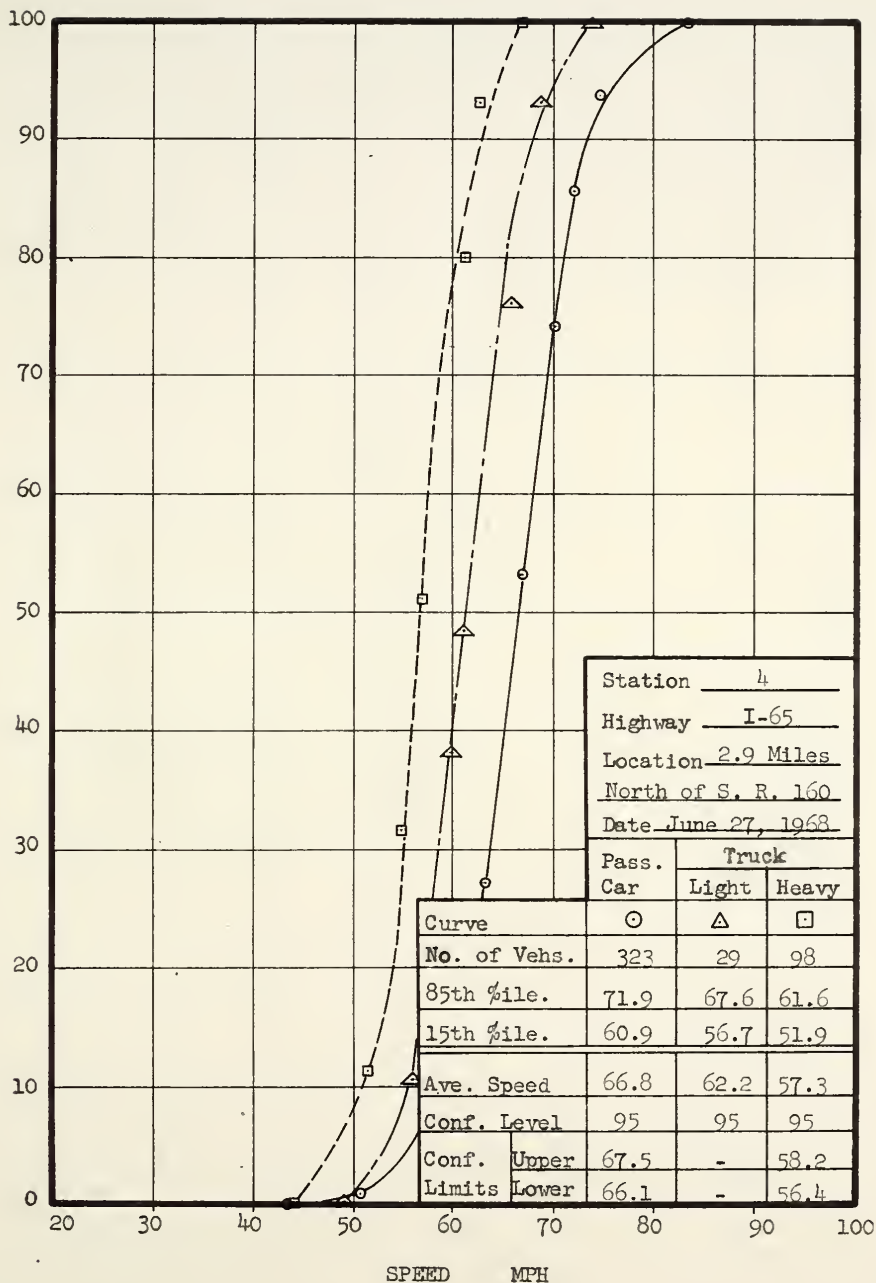


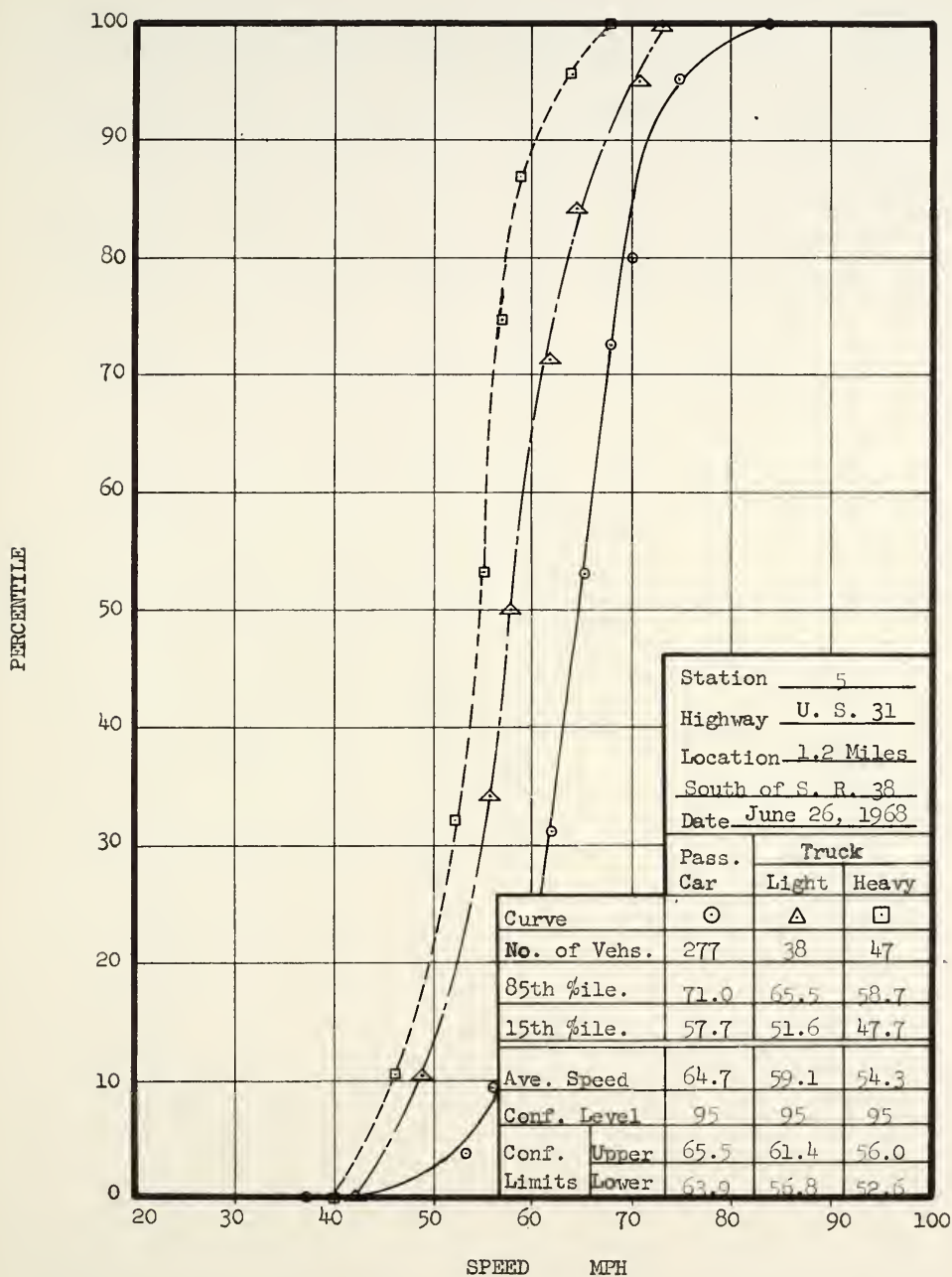
PERCENTILE

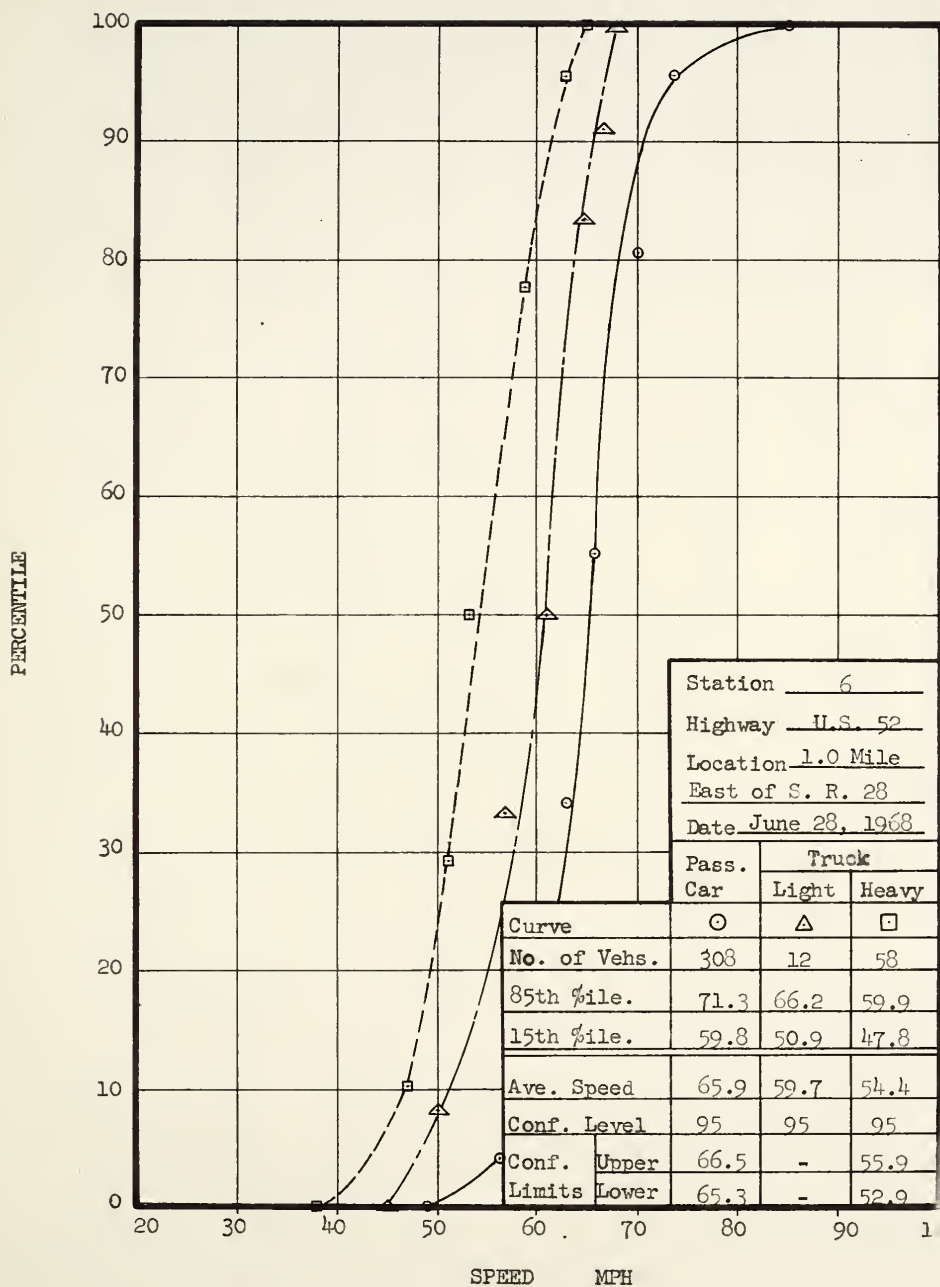


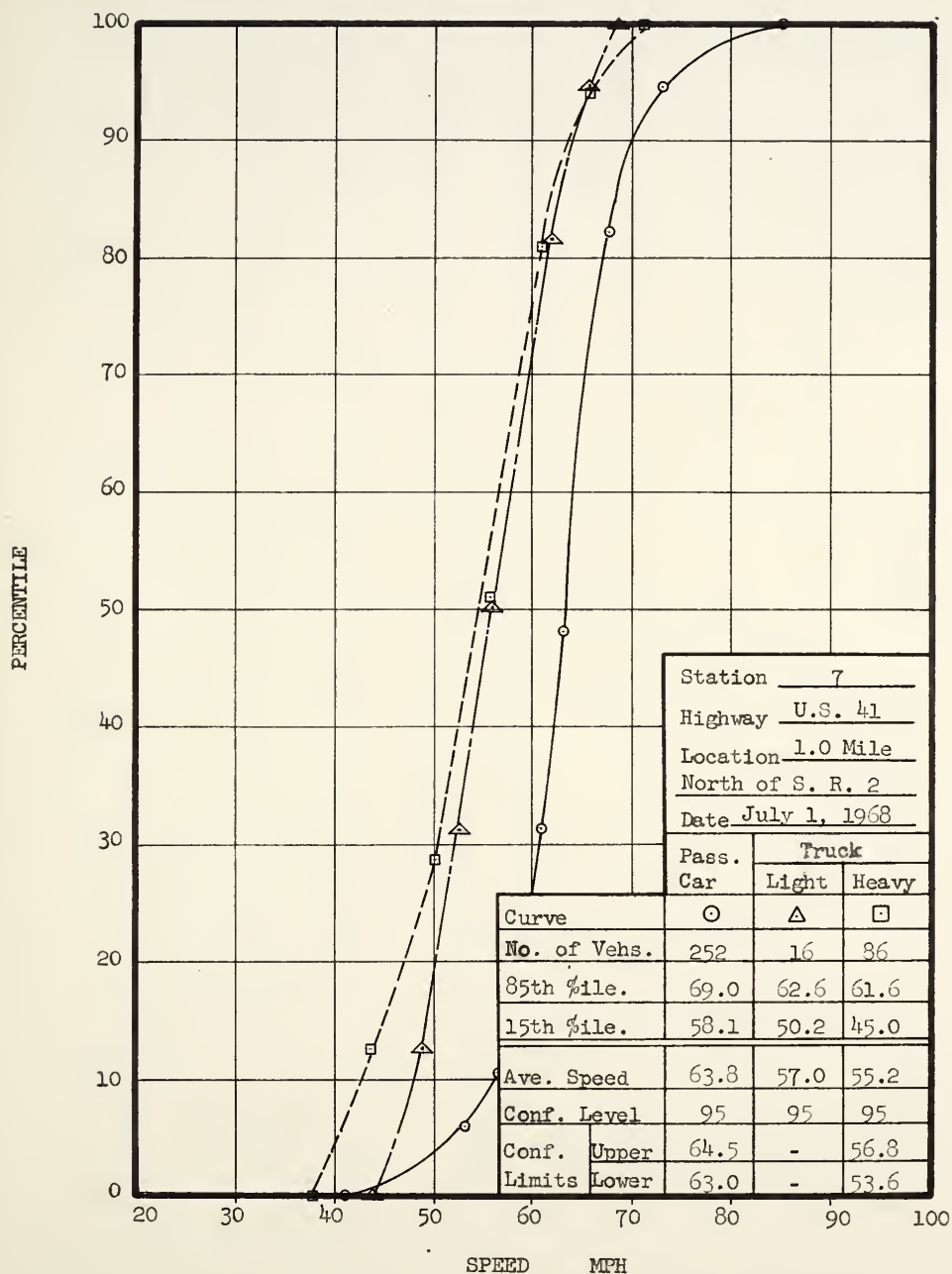


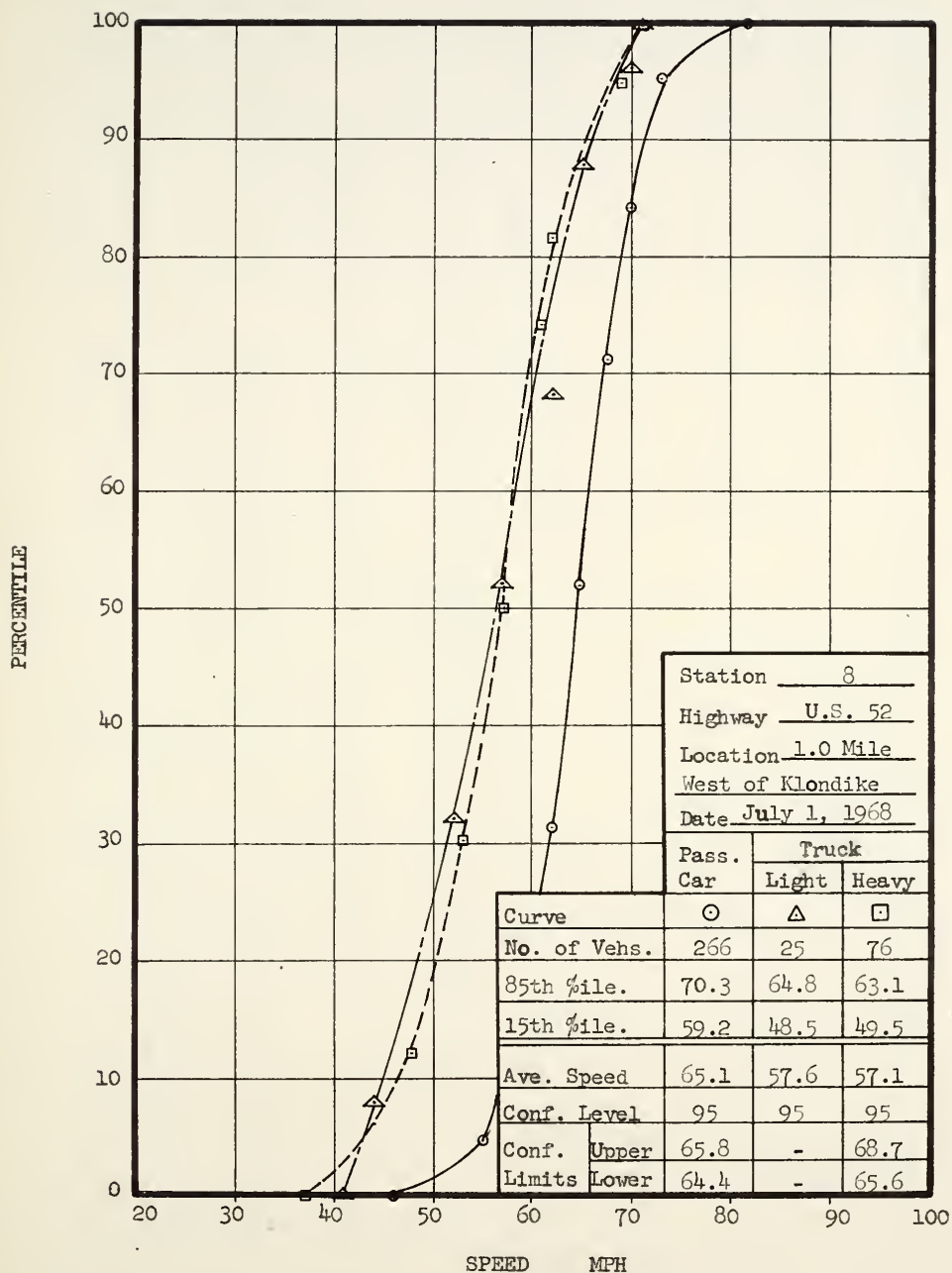
PERCENTILE

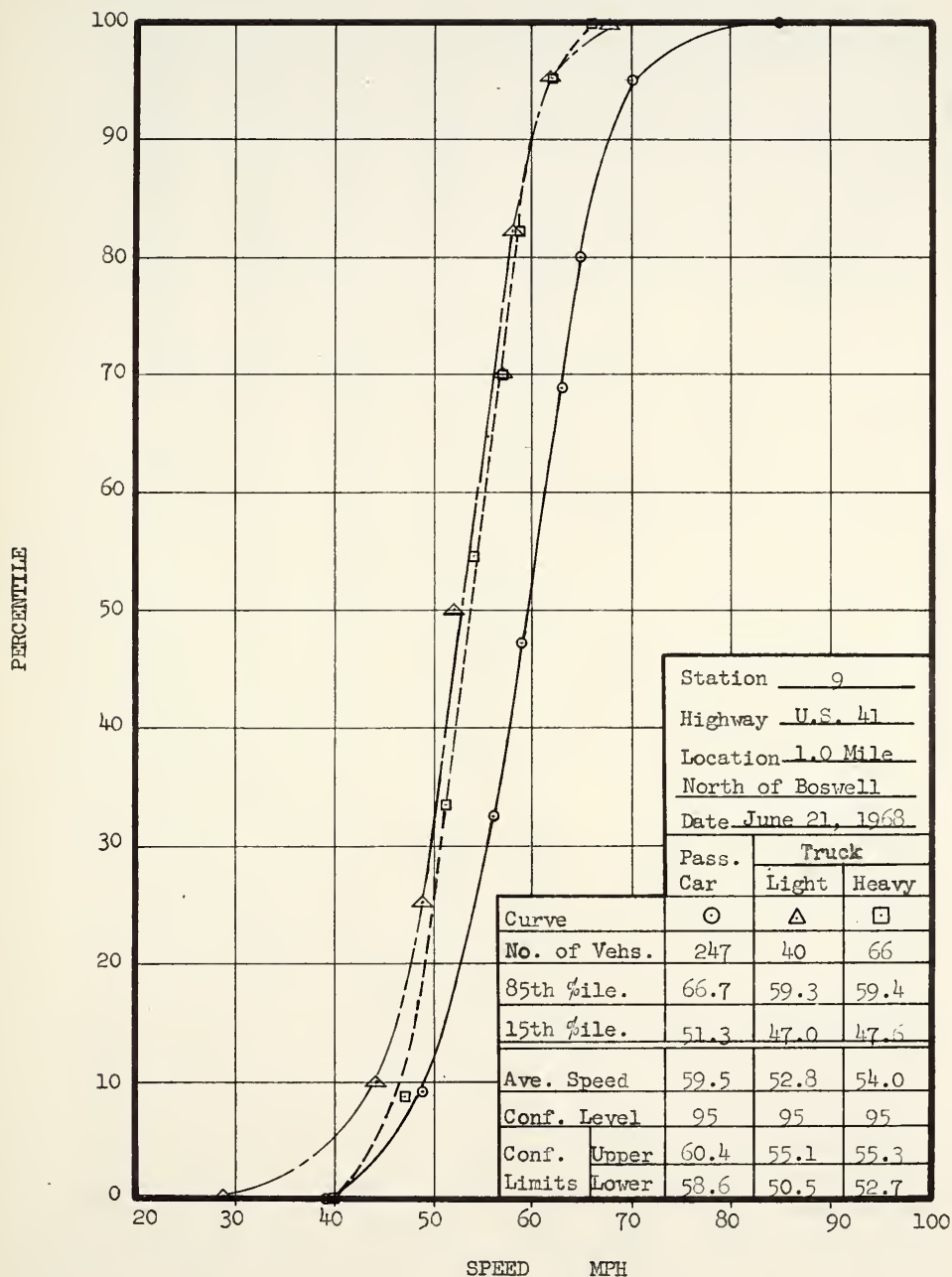


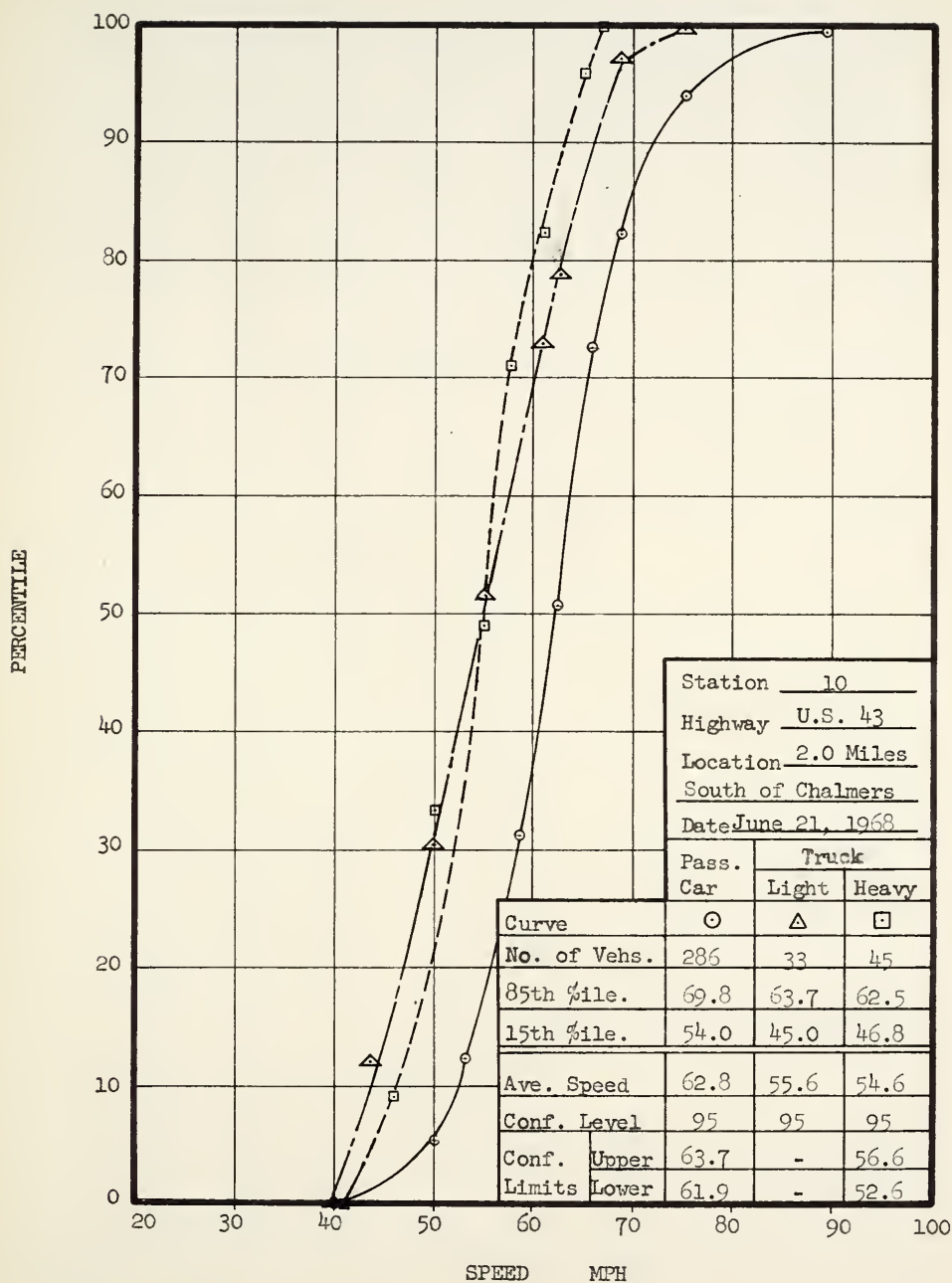




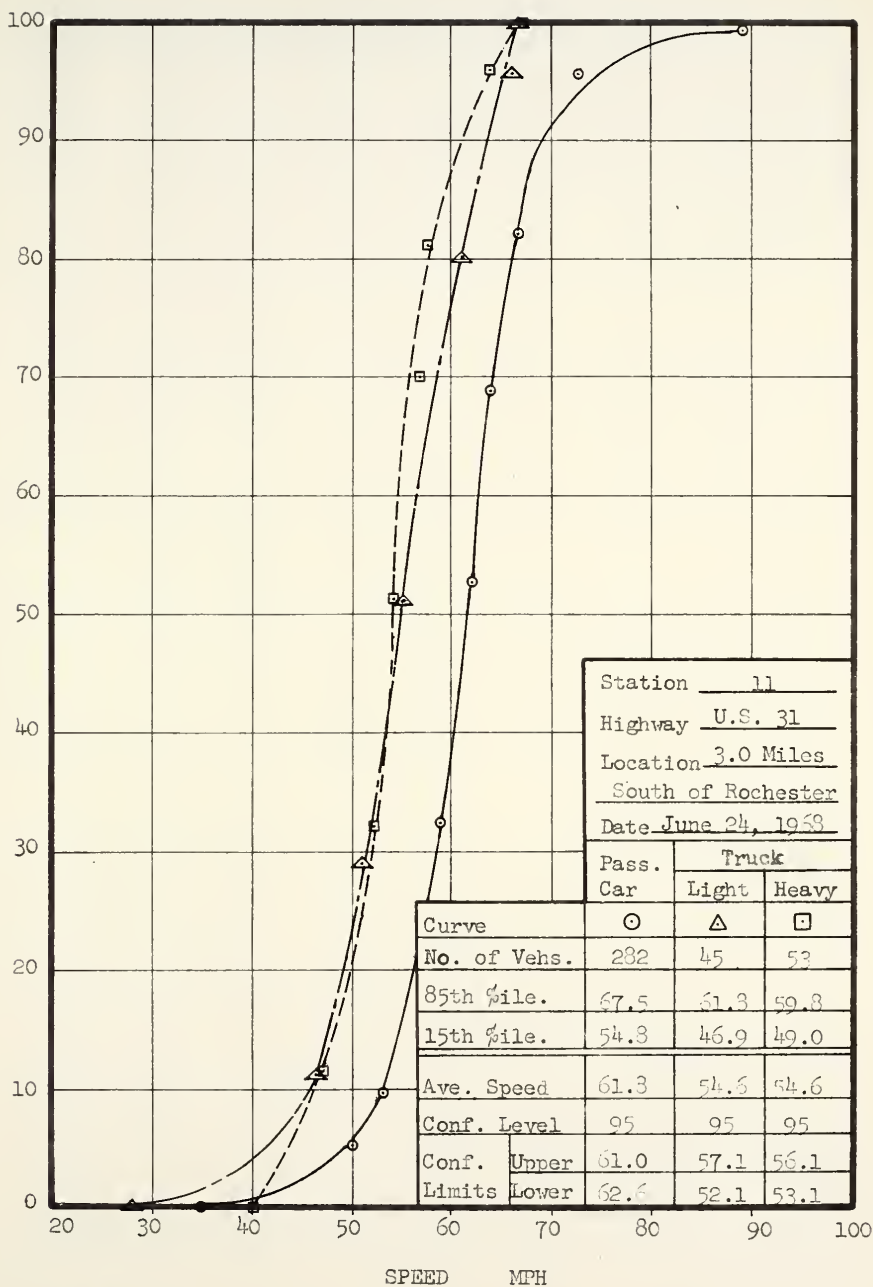








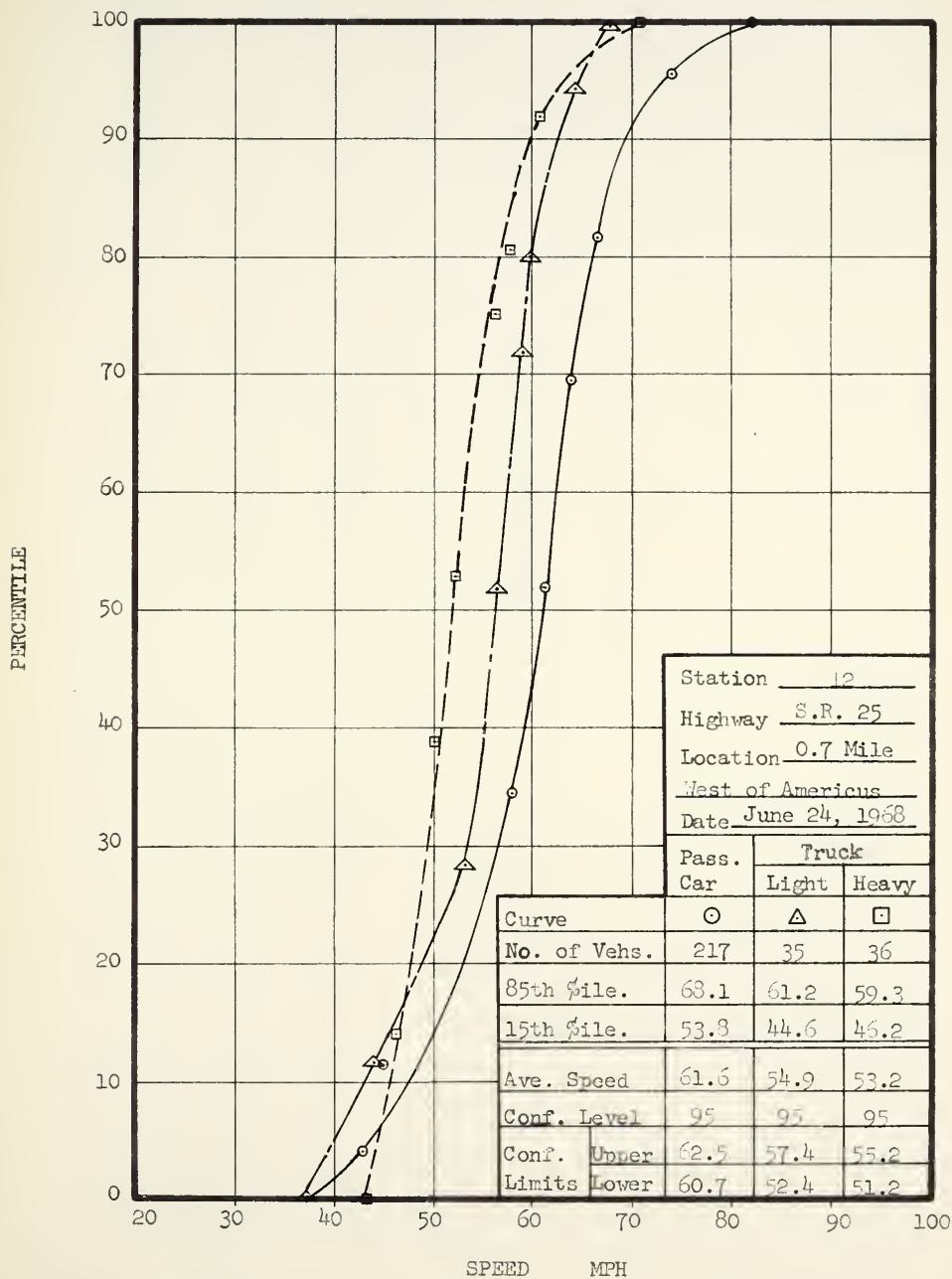
PERCENTILE



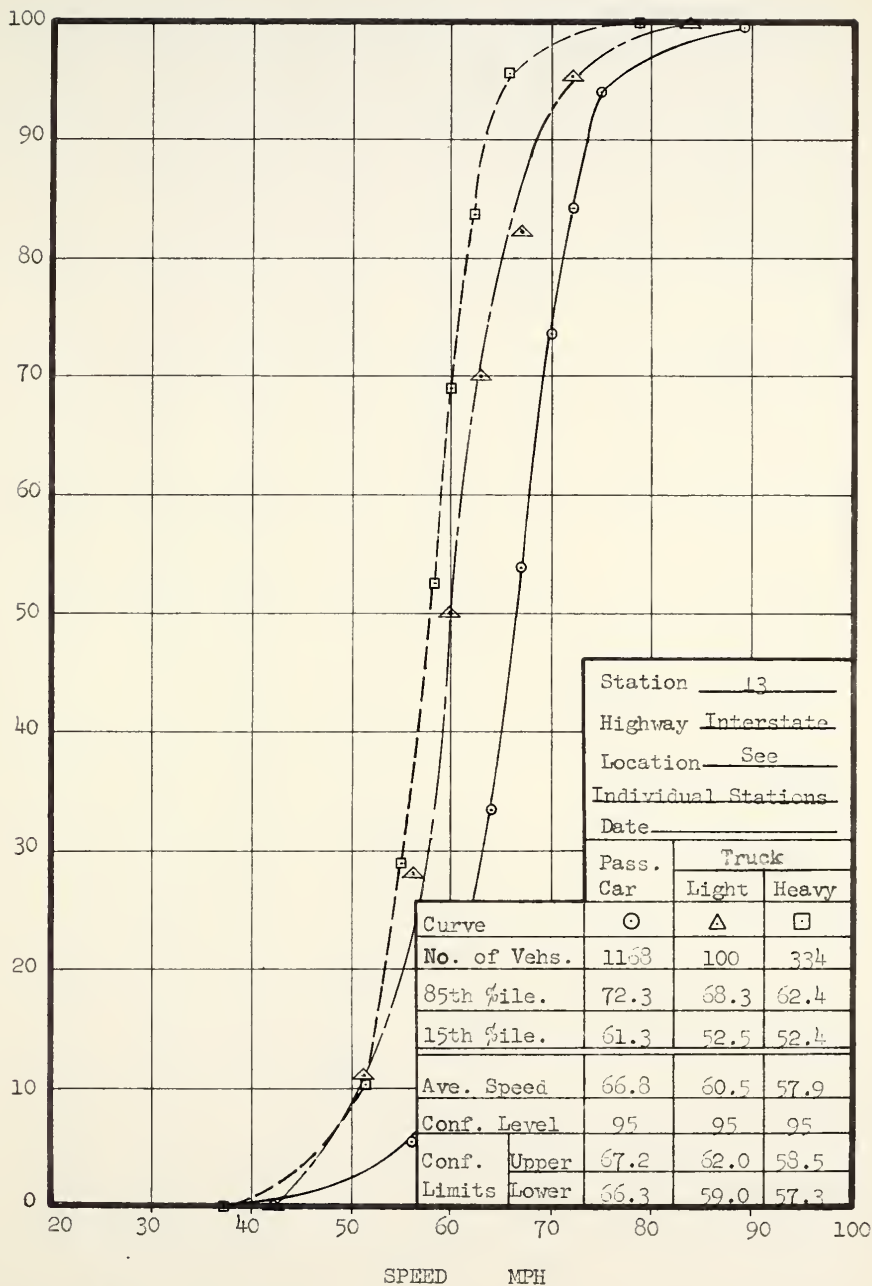
SPEED MPH

Station 11
 Highway U.S. 31
 Location 3.0 Miles
South of Rochester
 Date June 24, 1958

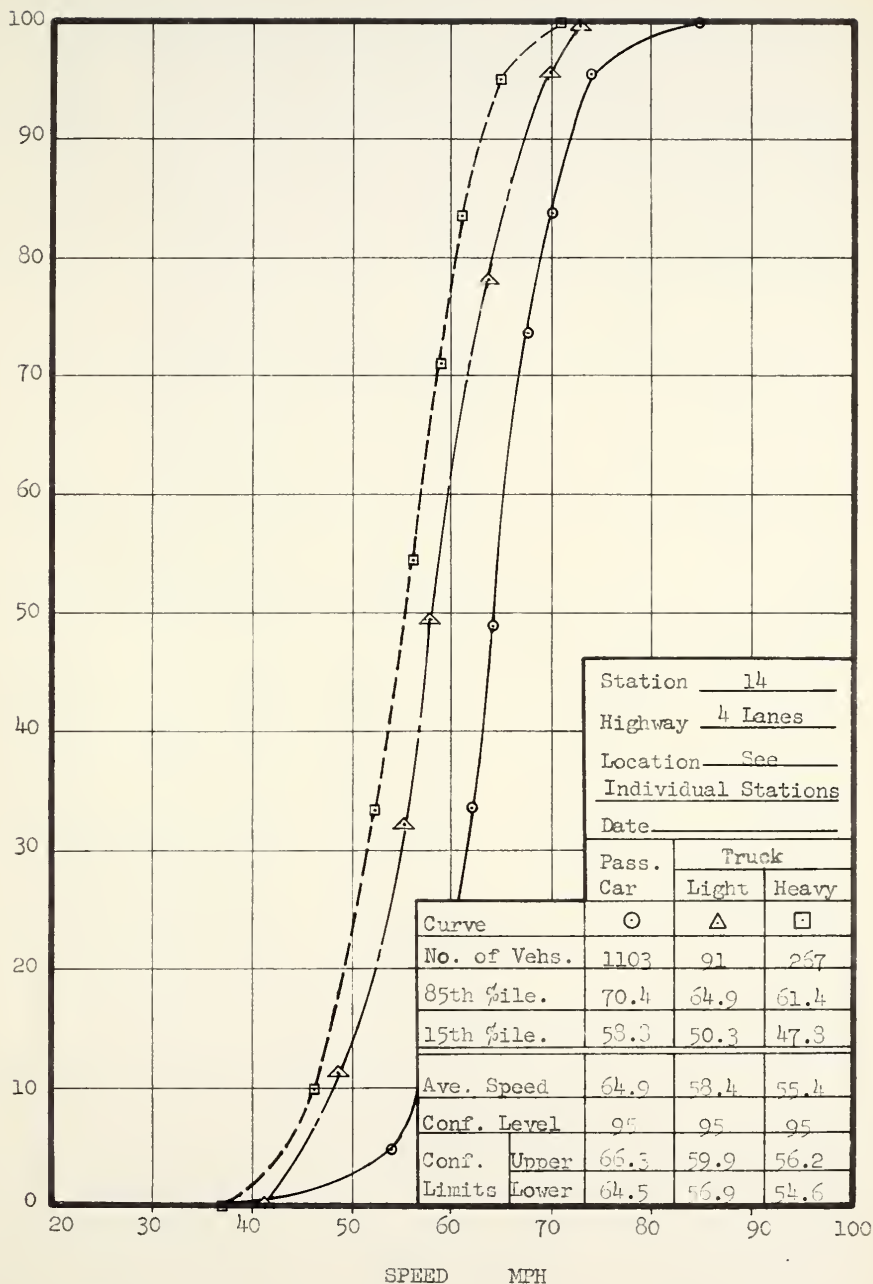
	Pass. Car	Truck	
		Light	Heavy
Curve	○	△	□
No. of Vehs.	282	45	53
85th %ile.	67.5	61.3	59.8
15th %ile.	54.3	46.9	49.0
Ave. Speed	61.3	54.5	54.6
Conf. Level	95	95	95
Conf. Upper	61.0	57.1	56.1
Limits Lower	62.6	52.1	53.1



PERCENTILE

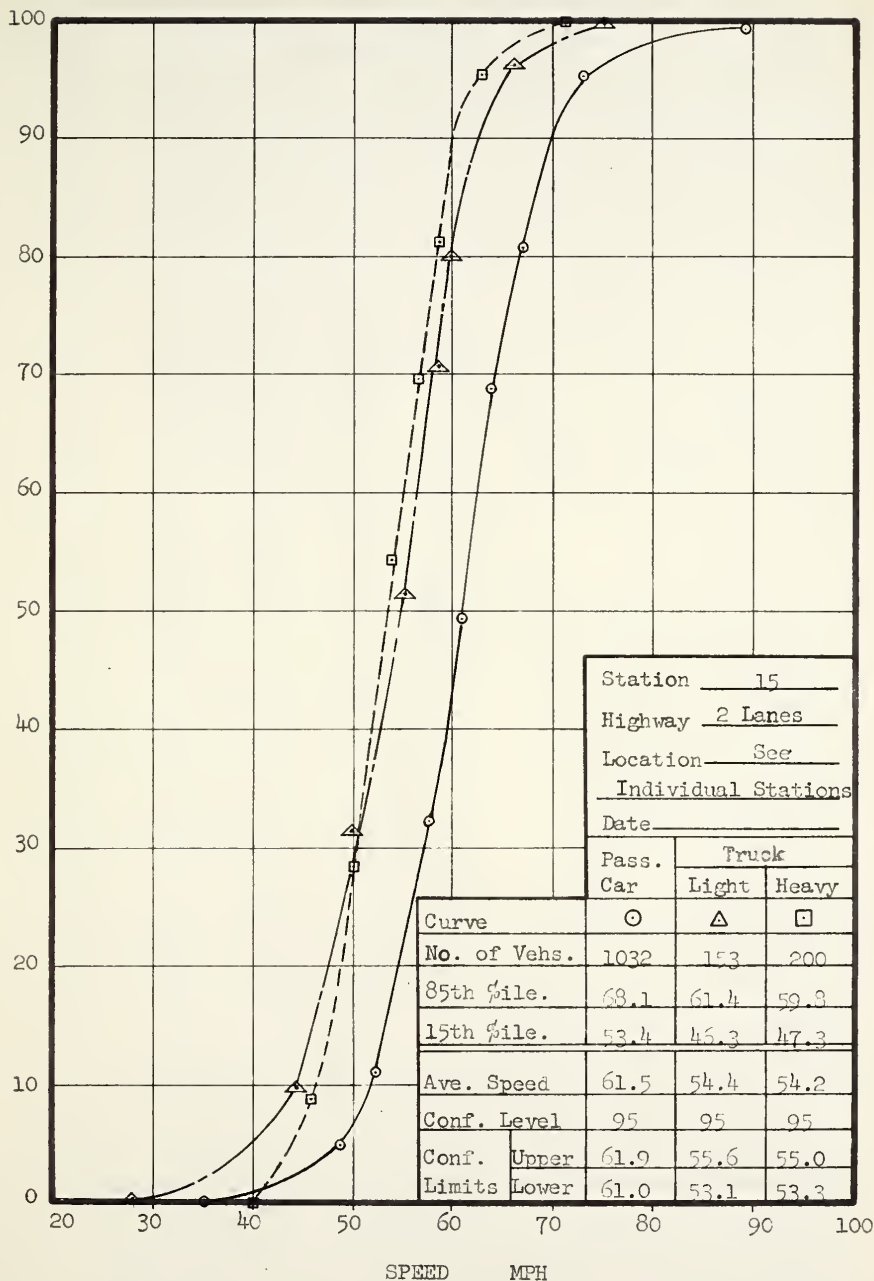


PERCENTILE



SPEED MPH

PERCENTILE



SPEED MPH

PERCENTILE

